THE ANNUAL REPORT OF THE PUBLIC PRINTER

1938

THE ANNUAL REPORT OF THE PUBLIC PRINTER

SUBMITTED TO THE CONGRESS OF THE UNITED STATES ON JANUARY 3RD, 1939

1938

A. E. GIEGENGACK, *Public Printer*

❖ ❖ ❖

GEORGE ORTLEB, *Deputy Public Printer*

R. H. HERRELL, *Administrative Assistant to the Public Printer*

MISS JO COFFIN, *Assistant to the Public Printer*

HENRY H. WRIGHT
Chief Clerk

MAYBELLE G. FICKEL
Liaison Officer

EDWARD M. NEVILS
Production Manager

RAYMOND H. LECRAW
Night Production Manager

WILLIAM SMITH
Assistant Production Manager

WILLIAM A. MITCHELL
Superintendent of Planning

HOWELL K. STEPHENS
Superintendent of Composition

JOHN A. MCLEAN
Superintendent of Platemaking

BERT E. BAIR
Superintendent of Presswork

FRANK A. TSCHIDA
Superintendent of Binding

ERNEST E. EMERSON
Director of Purchases

FELIX E. CRISTOFANE
Comptroller

ALLA G. STEVENS
Superintendent of Stores

CHARLES P. WAITE, M. D.
Medical and Sanitary Director

ALFRED E. HANSON
Mechanical Superintendent

ALTON P. TISDEL
Superintendent of Documents

JAMES B. BENNETT
Captain of the Guard

WILLIAM A. SMITH
Congressional Record Clerk

MORRIS S. KANTROWITZ
Technical Director

CONTENTS

THE ANNUAL REPORT OF THE PUBLIC PRINTER

Washington, D. C., January 3rd, 1939

INTRODUCTION

I HAVE THE HONOR to submit to the Congress of the United States the following report covering the work of the Government Printing Office for the fiscal year ended June 30, 1938, as required by law.

Cost Survey

In my annual reports for the fiscal years 1935, 1936, and 1937 I reported to you in some detail the new methods and processes that I had established in the Government Printing Office to increase its efficiency, to reduce costs, and to enable it to render better service to the Government as a whole. I believe you will be interested to have the facts concerning the results accomplished by these improvements from an entirely disinterested investigator. The findings appear in a report made to the President under date of January 27, 1938, by a special inspection engineer who was detailed to make a study of the Government Printing Office and its operations for the President. The purpose of the inspection was unknown to the employees of the Government Printing Office, and the inspector's report to the President was confidential. However, after its submission to him and believing that the Congress and the departments would be interested in the findings, I secured permission to quote from it to the Congress.

Extracts from the engineer's report are as follows:

Purpose

Ascertain facts concerning questions raised by the President under date of December 23, 1937, in the following words:

Many departments and agencies are complaining about the increased cost of Government printing at the Government Printing Office. In some cases they tell me the cost has doubled since a year ago. They also say they can get the work done on the outside in union shops for a much lower price.

Allegedly Increased Prices for Printing

The findings with respect to complaints made to the President that the costs to many departments and agencies have increased during the last year are:

(*a*) The charges made by the Government Printing Office upon certain classes of printing have been increased in conformity with a new schedule of charges which became effective on October 15, 1937.

(*b*) The charges made by the Government Printing Office upon other classes of printing have been decreased in conformity with the new schedule of charges which became effective on October 15, 1937.

(*c*) The new schedule of charges supplants an old basic schedule which had been in effect since the early days of operation of the Government Printing Office and which did not reflect the changed balance in production costs of various classes of work brought about by modern production methods.

(*d*) The new schedule is predicated upon an exhaustive cost-accounting study which was carried on for nearly 2 years simultaneously with the installation of a modern cost-accounting system—the first real costing system ever installed in the Printing Office.

(*e*) The new schedule is designed to cause charges made upon the respective classes of production to reflect the entire costs of producing each class so that high charges will be made for expensively produced work and low charges will be made for cheaply produced work.

(*f*) The anticipated over-all results of the operation of the new schedule of prices are identical with the corresponding results of the superseded schedule in that the total charges collected from customer departments and agencies will be just sufficient to meet all of the expenses incurred in the operation of the Government Printing Office.

Indicative of the magnitudes of differences determinable for identical jobs through the application of the old and new pricing systems are the following examples taken from several hundred analyses made by the Government Printing Office. The study from which the illustrative examples were selected embraced actual jobs passing through the Printing Office. The process of selection was such as to insure the procurement of a truly representative cross-section of the work handled. The data are presented in table 1, attached hereto.

(*g*) Cognizant of the fact that complaints were to be expected from customer departments and agencies whose printing costs have been increased upon certain items through loss of ability to obtain certain items at prices less than cost, the Public Printer has offered to make available to the customer departments and agencies the advice and talents of specialists in the Printing Office in order that the services of experts may be freely utilized for the selection of appropriate paper and forms at the most economical prices consistent with the character of the product.

Allegedly Lower Prices in Outside Union Shops

The findings with respect to allegations that complaining departments and agencies can get printing done by outside union shops for much lower prices than charged by the Government Printing Office are:

(*d*) While it is possible that upon isolated items of printing, outside union shops might consistently be able to quote prices lower than charges made by the Government Printing Office, upon other items the charges made by the Government Printing Office are lower than outside union shops could be expected to quote.

(*e*) Upon Government printing as a whole, it appears that the aggregate of all charges made by the Government Printing Office would be expected to approximate the corresponding charges if the work were to be done in outside union shops and exclusive of consideration of intangibles embracing the nature and quality of special services rendered.

(*f*) The diversion from the Government Printing Office to outside union shops of any class of printing which the Printing Office has heretofore done would be expected to cause increased costs, and therefore charges, upon work not diverted due to costs arising from fixed overhead that must be charged against the volume of work actually produced.

(*g*) No consideration has been accorded the possible magnitude of premiums that might be charged in outside union shops for special rush services which governmental departments and agencies often require. Premiums for this class of work are usually determined by "what the traffic will bear." On the other hand, it is appropriately noted that the charges made by the Government Printing Office include all costs incidental to the performance of such special services.

Collateral Observations

(*a*) *Equipment of Printing Office.*—Management and operating personnel offer no complaints and appear to be generally satisfied subject to the limitations of restricted space.

(*b*) *Morale of employees.*—Appears to be excellent.

(*c*) *Conditions in present plant.*—Crowded but should be relieved somewhat now that the new warehouse is available and adequately corrected when the proposed addition is completed.

The table referred to in the engineer's report appears on the following pages 4 and 5.

TABLE 1.—*Comparative costs of identical jobs based upon old and new pricing systems employed by Government Printing Office*

CASE I—OLD PRICING SCALE CHEAPER

Jacket No.	Customer, department, or agency	Description	Number of copies	Size	Product	Comparable charges			
						Old scale	New scale	Difference	Percent increase or decrease
3670	Treasury	Form 72—Part 1	50,000	14 by 8½	Form	$117.46	$152.96		
8315	Pan-American	Pan-American Bulletin	600	6¼ by 9¾	Pamphlet	521.83	600.65		
8545	National Bituminous Coal Commission.	Form 185-ST	8,000	19 by 14	Form	126.69	173.37		
8725	Labor	Miscellaneous Expenditures Record Card.	1,000	8 by 5	do	15.75	24.99		
10700	Agriculture	Soil Conservation, Vol. 3, No. 3	5,000	8 by 10½	Pamphlet	677.66	741.91		
105490	Navy	Navy Training Course	5,000	6 by 9	do	1,584.71	1,914.86		
107842	Justice	Binding—Records and Briefs, volumes	54	6 by 9	Binding	383.66	480.03		
149630	Commerce	Boiler Inspection Report	5,000	4 by 6½	Books	385.75	461.68		
154020	National Emergency Council.	U. S. Government Manual	5,000	5¾ by 9	Pamphlet	1,260.59	1,446.37		
154035	Resettlement Administration.	Form 36—Revised	750,000	8 by 25	Form	2,194.00	2,425.16		
154320	Social Security Board	Publications of Social Security Board	50,000	4 by 9	Pamphlet	749.65	893.31		
						8,017.75	9,315.29	+$1,297.54	+16.2

2079	Treasury	Form 5119—Manifest & Receipt	7,000	5½ by 9	Books	$3,244.73	$2,026.46		
4487	Post Office	Form 3849—Notice of Registered Mail	30,010,000	5 by 3	Form	9,807.66	7,368.75		
4916	Farm Credit Administration.	Temporary Receipt Books	25,000	8 by 3½	Books	2,693.61	1,895.56		
5682	Treasury	Deputy Collector Receipt Books	5,000	8 by 3½	do	1,371.88	768.00		
6696	Navy	Form 336–S. A.—Issue of Messes	12,115	4 by 8	do	1,967.63	995.98		
8131	Post Office	Form 3813—Sender's Receipt	39,896	8¼ by 7¾	do	6,676.14	5,085.22		
8908	Treasury	Form 1040—Individual Income Tax Return Duplicate.	11,304,000	17 by 11	Folded	33,984.91	32,621.19		
8909	do	Form 1040A—Income Tax Return	8,000,000	8 by 10½	do	12,588.35	9,737.71		
8910	do	Form 1040A—Income Tax Return Duplicate.	16,057,000	8 by 10½	do	24,362.36	18,298.36		
10610	Navy	Form S & A–4—Transport Pay Account	500,000	7 by 8	Pads	721.17	532.81		
11812	do	Form 10—Report, Material Shipped	2,100,000	8 by 10½	do	4,183.93	3,401.28		
15686	Treasury	Urgent Notice—Every Income	6,215,000	8 by 3½	Form	2,552.64	1,990.03		
16305	do	Institution Income Tax Form 1040A	8,000,000	8 by 10½	Folded	11,919.90	8,783.69		
16306	War	Form C. C. C. 1—Individual Record	500,000	8 by 10½	do	5,865.88	4,826.28		
17336	Treasury	Form 1099—Information Return	23,000,000	8 by 3½	Form	8,589.12	6,867.82		
17344	do	Form 1096—Information Return	1,550,000	8 by 10½	do	1,755.55	1,666.31		
21485	Agricultural Adjustment Administration.	Form G–76—Farm Solidarity	250,000	6 by 9	Pamphlet	1,292.44	727.98		
22391	do	Charting Course for Cotton	687,000	6 by 9	do	3,726.78	2,058.09		
22486	do	Agriculture Conservation—Why?	2,330,000	6 by 9	do	21,060.63	13,351.46		
122420	Post Office	Form 3852—Manifest Registration Book	65,010	10½ by 4	Books	13,341.91	8,924.42		
						171,707.22	131,927.40	−$39.779.82	−23.1

The work of scientifically assembling the financial facts so necessary to intelligent management and to proper billing has been under way for some time. These facts are being assembled by means of a modern cost-accounting system that is bringing to light those operations which are costing too much, and are enabling the Office to handle the work in the most economical manner. We are determining the cost of each job and of each operation involved in completing the job and the product resulting from the particular operation. Through the system we have found that the Office was doing a great deal of additional work in conjunction with regular operations for which no charges were being made. The time spent, of course, on this work was charged to overhead and tended to increase the charge for work done on other jobs for other departments.

Cost accounting in the printing industry has long been considered one of the most exacting phases of business accounting. This is due to the job-order nature of the industry's product wherein every order is different, even though many may have similar physical appearance. Each order meets and creates a new set of conditions; an apparently minor change in the specifications of one order in relation to another may necessitate entirely different production methods on succeeding operations; thus a printing order is virtually a requisition for a group of independent elements which must be distinctly specified in the requisition. Cost accounting in the Government Printing Office is now a highly important part of the administrative functions of the Office, and the methods developed to ascertain cost and control production are among the most modern and complete in the country. Based upon the conclusion that each operation of production should economically justify its entire expense and that the unit charges for billing should be based upon the average total costs of the units determined from actual experience, facts are developed which permit the Office to function both as an economical business institution and as a governmental service agency.

The financial structure upon which the Government Printing Office operates is comparable with, but probably more exacting than, those encountered in private corporations. No direct appropriations are made by Congress to defray the cost of operation, and, like the private corporations, all expenses must be recovered by charges for its product. Unlike the private firm, surpluses accruing at the end of the year must

be returned to the Treasury, and reductions must be made in charges for the ensuing year to obviate a repetition of the surplus.

The volume of detail and the speed and accuracy of the accounting functions desired are such that normal clerical functions must be supplemented by accounting machines. The system employed by the Government Printing Office is the punched-card method of accounting—commonly known as the electric accounting machine method. This system consists of perforating cards by the use of an electrical keyboard punching machine with an arrangement of holes representing the exact figures or words contained in the source record. The punched cards are then used to operate electrical bookkeeping and accounting machines capable of fully automatic sorting, multiplying, adding, and subtracting, and printing the results in any desired sequence on prepared forms.

Purposes of Cost Accounting and Production Control System

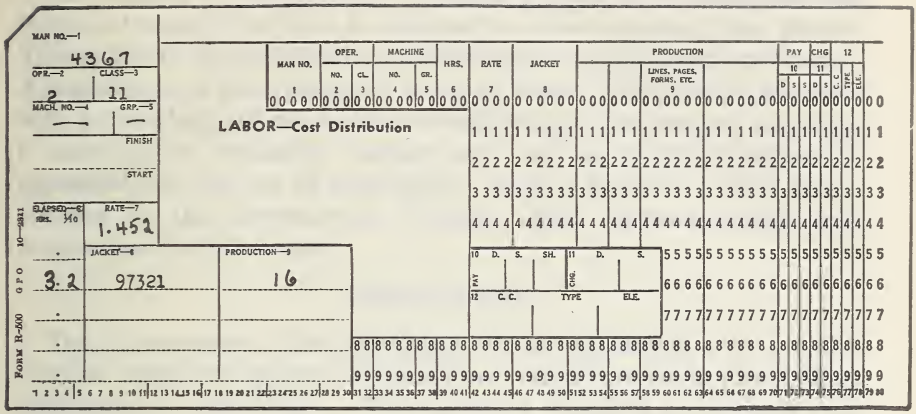
Prior to 1860 governmental printing was provided by public bid and contract, but with the growth of governmental activity these methods proved unsatisfactory from the standpoints of economy, quality, and service, and thus the Government Printing Office came into existence. It has grown to be the largest complete printing plant in the world, and its 115,000 orders yearly, totaling $18,000,000, require approximately 5,500 employees and several thousand machines to complete. As a complete service unit, the Government Printing Office has no commercial or private equal. Such accomplishments as the complete production and distribution of the Congressional Record in 7 hours with a variation in size from 4 to 303 pages; the production of 85 million unemployment census forms from committee meeting and drafting board to Post Office mail express trains in a limited time are typical of the continuous service expected of the Government Printing Office. Such requirements necessitate careful financial check to obviate unintentional disregard of economical production methods in an endeavor to render superservice; both economy and service must be considered and economic methods followed unless the governmental need for service is such as to outweigh or make impractical their use.

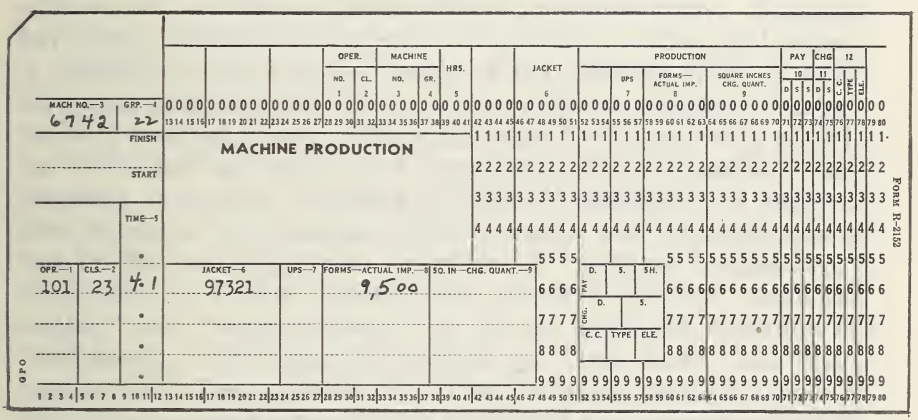
From actions and public statements it appeared to be the opinion of some governmental departments that the Government Printing Office could not operate as economically as commercial or private plants. This was fostered by comparisons of charges rendered by the Government Printing Office with estimates made by private firms.

On many individual orders great variations both over and under the commercial price were found to exist, but a cross section of many orders often would reveal similar totals. This was caused by the unscientific manner in which a scale of prices had been compiled by flat percentage increases or decreases because of over- or under-cost recoveries of the Office as a whole under old scales of prices. Such action was patently inaccurate, as conditions will not exist wherein each individual operation of production will continue to remain in exact cost relation to all others and such continued action could result only in a complete distortion of fact. It would have been useless for the departments to have attempted to plan their work in the most economical manner, as such savings would not have been reflected in the charges. Inasmuch as no dependable facts as to basic unit costs were being compiled, it would have been impossible to establish a scale of prices based on a sound footing until a system was installed whereby these facts could be compiled. This was the major purpose for the installation of the cost-accounting and production-control system.

Careful thought was given to the type and structure of cost-accounting methods to be installed, and it was decided that inasmuch as the Government Printing Office was being compared with private or commercial printing firms it was advisable to adopt cost-accounting methods comparable with those employed by the industry as a whole. The trade employees of the Government Printing Office are generally recruited from the commercial industry; thus their ability was comparable with that of employees in private practice. The tools, machinery, and equipment of the Government Printing Office could be gotten only from established corporations doing business with all. The materials used in production could not vary greatly from those available to the general industry. Items of general expense are controlled by labor and machinery; thus they, too, would conform with commercial expense. Such commercial expenses as factory rent, taxes, and bonded and financial debt are directly comparable with—and approximately equal—governmental expenses of building maintenance and improvement, employee leave privileges, governmental expense limitations, and editorial preparation requirements.

Printing styles, methods, and products are constantly changing; machines supplement hand work and perform previously impossible operations; improvements in technique and materials alter the general structure and component operations of a printing job. An adequate cost-accounting system will reveal all functional changes and will reflect the relative value of the changes. Improvements in quality and





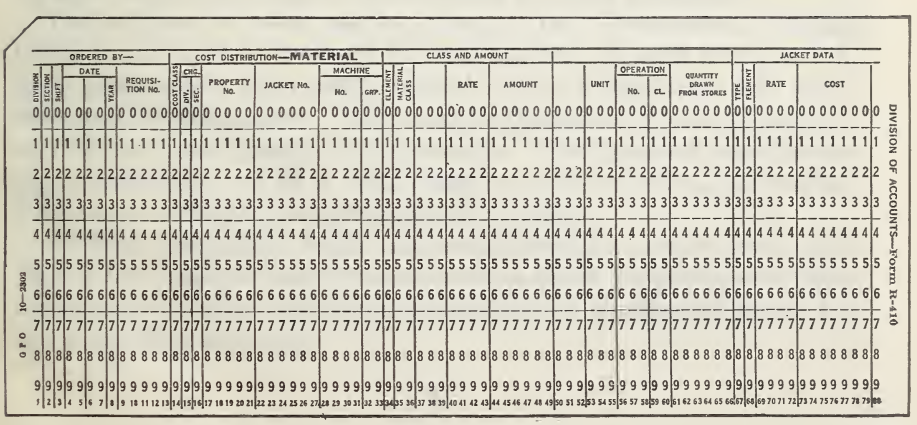


FIGURE 1

O-113626

speed alone are not of full importance—expense must be considered.

The control of production in a printing plant necessitates the collection of more detail than is collected in other manufacturing plants. This is due to the multitude of independent and unrelated operations. A knowledge of the volume of work on hand or in process, together with a knowledge of the hourly or daily output per man or machine, is essential to intelligent management and to proper direction of personnel and the use of equipment. Such a function is now incorporated in the Government Printing Office cost-accounting and production-control system.

General Structure

The Government Printing Office as an organization is broadly divided into four groups of functions: administration, production, maintenance, and service. These general functions are divided into many sections, each representing a specific cost account, and some of these cost accounts are further divided into cost centers. Numbers have been designated to represent each division, section, and center. A complete survey has been made of the different types of work performed in each section and a number, called an operation number, has been assigned to each. The same type of work may vary according to the size and style of the completed product; therefore it was necessary that these variations be studied, classified, and assigned class numbers. An example of the operation and class principle is had in the composing-room operation of "machine composition," which may be further classified into "straight matter," "technical matter," and "tabular matter"; or in the pressroom operation of "make-ready," which may be classified into "type forms" and "halftone forms." The operation and class numbers assigned follow a definite pattern and can be readily recognized and generally classified on sight without the need of complicated decoding schedules.

The volume of work passing through the Government Printing Office is sufficient to warrant the manufacture of such items as ink, glue, press rollers, type metal, machine parts, special tools and furniture, and shipping cases. Each must be treated as an individual item, and its cost must justify its continuance. Such general manufacturing requires the use of a wide range of cost-accounting principles. There are six independent principles employed:

(1) The chargeable hand and small-machine hourly cost rate. This is the principle used for such work as hand composing and binding operations where employee productive, or chargeable, hours are the controlling cost unit.

(2) The chargeable machine-hour cost rate—used on such work as presswork, where the machine hours are the productive measure, and labor, materials, and overhead are collectively the expenses.

(3) Common-unit cost rates are determined for electrotyping and photoengraving. Here the costs of labor, materials, and overhead are separated into definite operation total costs and the square inches (common unit) of the finished product are the measure.

(4) Internal commodity costs are direct intersectional charges for finished or semifinished products or materials such as bindery end sheets and lined boards, ink toners, etc.

(5) Building, machinery, and equipment-improvement costs wherein semipermanent property is created.

(6) Stock or finished-product costs are treated independently to facilitate production and administration. Inks, rollers, pads, and tablets fall in this group.

Source Records

When an order is received by the Government Printing Office, complete specifications for its production are prepared upon the face of an envelope or jacket in the Planning Division at the time the estimate is made, and the jacket is given a number for ease in identification. From this point the jacket enters the production sections, and productive work requiring accurate accounting is commenced.

In order to simplify work instructions and coordinate and control production, central work-recording stations have been established throughout the service and productive sections. All employees report to these stations for assignment to work and receive complete instructions for the work to be performed. These desks are manned by employees who are familiar with all of the types of work done and the materials used by the section and the proper methods to be followed in recording the transactions. Throughout the plant procedures have been standardized to facilitate and assure accuracy.

Labor Cost Distribution

This form (see fig. 1, facing p. 8) is used by employees in the service and productive sections to record the time spent on each type of work or different jacket during their tours of duty for the day. At the beginning of the day each employee receives his first assignment of work from the central desk, and at the same time a card, upon which has been entered the proper code numbers signifying the type of work to be performed and the jacket for which it is to be done, is stamped with the starting time. When the employee has completed his first

AA-IA-$

TABULATED BY

JACKET NO.	DATE MO.	DAY	YR.	MAN NO	COST EACH OPN-TOTAL DIVISION	TOTAL COST OF JACKET	COMPUTED CHARGE BY OPERATION AND DIVISION -TOTAL JACKET CHARGE
87029					595		
87029					150		
					745*		
87029							
87029					84		
					84*		
87029					444		
87029					271		
87029					066		
					781*		
87029					290		
87029					42		
					332*	39,42	*

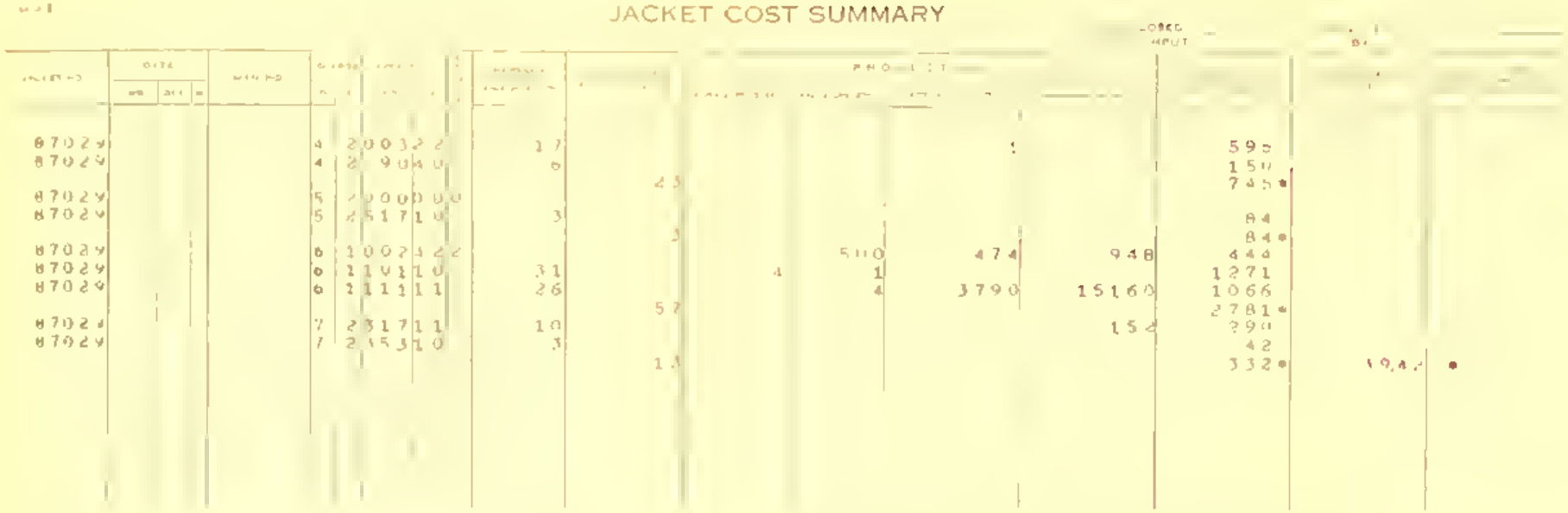
AA-IA-$

TABULATED BY

JACKET NO.	DATE MO.	DAY	YR.	MAN NO	COST EACH OPN-TOTAL DIVISION	TOTAL COST OF JACKET	COMPUTED CHARGE BY OPERATION AND DIVISION -TOTAL JACKET CHARGE
12844					266*		*
12844					380		
12844					255		
12844					340		
12844					112		
12844					092		
1284					390		
4					835*		
					[illegible]		
12844					[illegible]		
12844					975		
12844					975		
12844					026		
12844					410		
12844					261		
					984*		
12844					285 CR		
					715*	283350	*

O - 113626

JACKET COST SUMMARY



JACKET COST SUMMARY

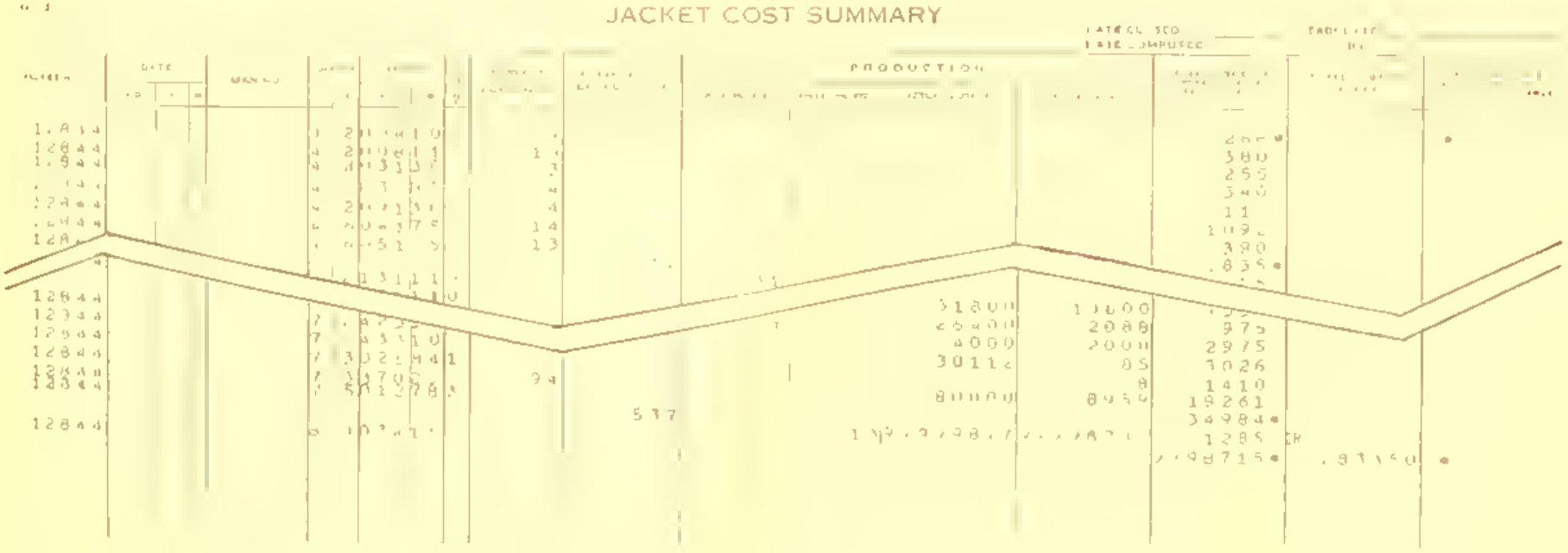


FIGURE 2

assignment, the card recording it is stamped "Finished" and the card for the second assignment is stamped "Started." The elapsed time on the first assignment is computed and the card filed as completed (all time is recorded and stamped in hours and tenths of hours). With the close of the day, the cards from all central stations are sent to the Accounting Division, where they are forwarded directly to the electrical card-punching and verifying machines. Upon completion of punching and verifying the card contains perforations which represent all of the exact information reported by the employee directly at the source of work. From this point on, all accounting, posting, extending, compiling, and summarizing is done automatically by machine and from the original source records. Errors and omissions due to transpositions in transcribing and posting are eliminated. Speeds range from 100 to 150 postings and calculations per minute. The "man number" and "rate" on each card are the official pay-roll number and hourly wage rate as recognized by the Office. Multiplication of the separate elapsed time reports by the rate per hour is accomplished automatically, and the resulting figure is automatically punched in the card. These daily cost distribution charges are reconciled with the actual day's pay roll, thus assuring agreement in these two accounts.

To facilitate time-stamp reading and computing, a job-recording clock system has been adopted wherein the starting time of the first shift is designated as 0.0, and time is stamped progressively through the next 24 hours in 0.1 hour skips (6 minutes); thus 1 hour after starting the clock will record 1.0 followed by 1.1, 1.2, etc., as 6-minute intervals elapse, and the last unit (6 minutes) before the end of a complete day (24 hours) will be 23.9 hours. The clock will then skip to 0.0 as the start of the first shift for the second day.

Generally speaking, there are four kinds of labor charges in the production and service sections; namely: (1) Productive hand work, where the employees perform certain operations by hand or with small machines; (2) nonproductive hand work, which comprises the essential work of supervision, messenger, and clerical duties, etc., and that time necessary in any type of manufacture during which production employees are preparing for or being assisted in preparing productive work; (3) machine operating and tending, wherein the labor is a burden against the machine and the machine becomes the producing factor; (4) maintenance, construction, and service, which includes labor performed, by a service section for an administration or production section and which must be included in the cost of the section for which the work is done. The operation and class numbers indicate

the type of work performed and by arrangement of significant digits in the code number, they also indicate the specific classification of the labor charge. In no case do code numbers indicate more than one type of charge; thus the distribution of labor charges becomes a purely automatic operation with no exception to established procedure.

Machine Production

In some of the production and service sections such as the pressrooms and machine shops, the machine represents the producing factor, and complete, progressive daily records are necessary of the work performed by the machine. Central work-recording stations are used in the same general manner as for labor-cost recording. There are three general types of time reported in machine sections: (1) Productive, where the machine is producing a salable article; (2) nonproductive, which includes preparation and tending time; (3) idle, where the machine is standing unused and without a crew.

As in the case of labor distribution cards, the machine production cards are sent to the Accounting Division at the end of the shift, where they are punched and recorded according to the type of work reported.

Material Cost Distribution

The Government Printing Office maintains a Stores Division carrying a stock of over 20,000 items of materials and supplies; each of these items is designated by a property number. All materials needed by all sections of the Office are requisitioned on a standard form drawn either by the central station or the supervisor and indicate the correct property number, quantity, and chargeable cost account. When the order has been filled the requisition is sent to the Accounting Division, where the basic information is punched into tabulating cards in the same manner as for labor and machine production. The punched cards are sorted together with master cards containing the correct unit price for the property number, and then multiplied to determine the total amount of each requisition. These operations are automatic, the same as the previously described punched-card operations.

One other basic form—the disbursement voucher or invoice—is used to account for charges for services such as power, outside purchases, trucking, etc., which are not recorded as labor or material. These constitute a very minor portion of expense and are recorded on punched cards in a manner similar to labor and material.

It will be recognized that the source records described in the pre-

Col. 2. Element of Cost—
0—Labor.
1—Material and Supplies.
2—Voucher charges.
3—Heat, Light, Power.
4—Maintenance.
5—Prorated Overhead—
General, Division, Section, U

X—Special Report Only.

Period .....

G. P. O. Form R-489

1 CH'GEABLE		2	3		9
Division	Section	Element of Cost	Cost Class	OPERATION NO. / Chargeable Quantity	UNIT COSTS AND REMARKS
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	0	1		
4	5	5	7		
4	5	5	7		
4	5	5	7		
4	5	5	7		
4	5	5	7		
4	5	5	7		
4	5	5	7		

O - 113626

MONTHLY COST REPORT—HAND AND SMALL MACHINE PRODUCTION

Division [illegible] Section Line Unit Band Mill Period

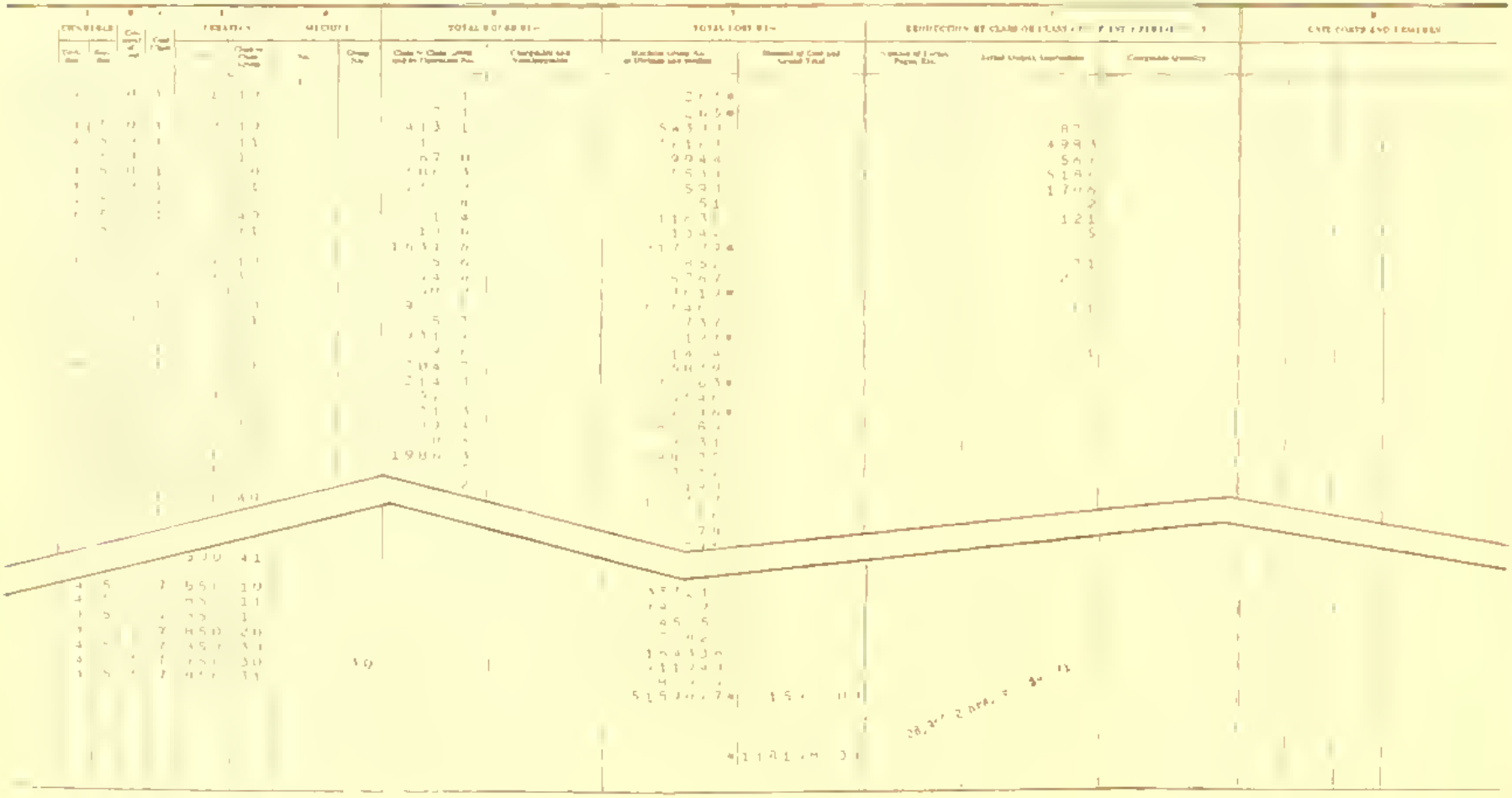


FIGURE 3

ceding paragraphs represent the entire range of operating expense. The information recorded on the punched cards includes all of the information needed for intelligent administration of the complicated, multifarious kinds and conditions of work encountered in the printing industry. By use of the original, single-source information, automatically and electrically rearranged according to the intent of the desired report, all of the succeeding forms are completed. In every case, a study of the form will indicate that the information is a direct transcription from part of the original records or a calculation or summary completed by the use of figures contained on the original records.

Jacket Cost Summary

In a job-order industry such as printing, the individual-order cost report has proved to be the most satisfactory method of collecting information for billing comparisons, general production control information, and work-in-process accounting; however, in large companies the expense and voluminous work involved for hand posting and transcribing has occasionally been regarded as prohibitive of the individual order report. The method developed by the Government Printing Office has enabled it to produce this accounting work in conjunction with other necessary accounting functions.

The reports of productive work turned in daily are filed by jacket number. When work on a jacket is completed, all of the individual cards turned in during the term of the jacket are taken from the file and run through a machine which prepares the Jacket Cost Summary form (see fig. 2, facing p. 10). Every charge of labor and material for each different type of work entailed in the production of the job is recorded on this form. All charges contain the overhead burden according to the all-inclusive hourly cost method. Thus the figures represent the total cost of completing each of the different kinds of work performed, and the form gives an accurate description of the actual method of production.

Monthly Cost Report

At the end of the month all of the daily costs, which have been summarized and filed as cards, are arranged according to the various sections of the Office (cost center or account), and a Monthly Cost Report (see fig. 3, facing p. 12) is prepared. This is a complete statement showing all of the items of direct and indirect cost, their source and disposition. The reports are run on the electric accounting machines in a prearranged progression with the actual productive sections

last. This permits the proration of administrative and other overhead charges to the production sections and results in the concentration of total operating cost in those productive sections wherein all-inclusive hourly rates and the other accounting items are cleared.

Together with the expense of each item and opposite the number of hours for each type of productive work, the total production or amount of completed work is shown. In addition to being a financial statement of expense and a statement of allocated costs, this report is also a complete review of production and can be used to determine the time and cost of each unit of production.

Unit of Cost Record

The cards containing hours and production which are used in preparing the Monthly Cost Reports are separated from the other cost cards and used monthly to compile a progressive record of unit costs (see fig. 4, facing p. 14) and to determine the average cost of the unit. All cost records are compiled so that 12-month average costs can be used as the basis for studies and for fixing the scale of prices for billing. Monthly postings are made directly by machine from the individual cards, and the machine automatically punches a summary card containing the total of the individual cards and corresponding exactly with the printed posting. These summary cards leave the individual or detail cards free to be used on other reports and permit faster machine work due to fewer cards.

Cumulative Record of Presswork

In order to be fully informed on facts relative to presswork, a monthly Cumulative Record of Presswork is prepared (see fig. 5, facing p. 16). Again, as in all cases, the information shown herein is a rearrangement of the original source record as prepared by the central station for the press at the time of doing the work. In the Jacket Cost Summary report and the unit of cost posting, similar presses are all combined within a group, so that the figures will represent averages for all equipment in use of a similar nature or purpose. On this report it is advantageous to compare each press with the other within the same group so that deficiencies may be noted and corrected.

This report, as its title implies, is prepared progressively. Each month a complete new report is run containing all of the information of the previous month plus the information for the current month. The previous month's report can then be discarded. The standards and percentages are determined automatically by machine and are printed by the machines with the other information.

TYPE OF WORK MACH. FOLD. Opr. 53

UNIT OF COST RECORD

Parallel - One Fold
Sheets 22 - 30 In.

DATE				OPERATION		PRODUCTION				TIME PER UNIT	COST PER UNIT	HOUR COST	
Month	Year	Division	Section	No.	Class	Hours	Number up	Actual Sheets	Chargeable Copies				
7	7	7	1	534		3159	3	9785477	63779833*				
8	7	7	1	534		4154	3	13606011	85711655				
9	7	7	1	534		2458	3	8262488	47655597				
0	7	7	1	534		220056	3	148305844	740217622				
1	7	7	1	534		3664	3	20463122	111039822				
2	7	7	1	534		2161	3	4822244	11778877				
1	8	7	1	534		3580	3	10657244	33659199				
2	8	7	1	534		5025	3	14623999	77097332				
3	8	7	1	534		5240	3	10949978	27811170				
4	8	7	1	534		4179	3	10136599	22808522				
5	8	7	1	534		3531	3	9367022	31515844				
6	8	7	1	534		4616	3	11667433	48445377				
						63773		272647411	1301521700*				

FIGURE 4

O-113626

Cumulative Record of Platemaking

This report (see fig. 5, facing p. 16) is similar in purpose to the presswork report and, like it, is replaced each month by a current copy. The report reproduced shows a record of square-inch electrotype production arranged according to type of molding. Further arrangements of the same cards are made to produce comparative figures of type of plate, type of face, and sizes of curve and gage. In this manner a complete picture is gotten of production for study by executives. The cumulated figures present the possibility for studying the trend so as to anticipate future work.

Pay Roll

Preparation of the pay roll (see fig. 6, facing p. 18, and fig. 7, facing p. 20) constitutes a major duty of the Accounting Division. It is especially exacting in the Government Printing Office because of the numerous rates, leave and hours of work regulations, deductions for retirement purposes, and governmental requirements for audit.

A system of pay-roll timekeeping and preparing has been developed wherein at the beginning of the pay period the total amount of pay to be received by an employee providing he remains in his regular pay status for the full ensuing period is determined and punched on a card. If the employee works each working day in the ensuing period at his regular pay rate, no further recording need be done, and at the end of the period his pay will be as predetermined. If, on the other hand, the employee is absent without pay, up-rated temporarily to a higher rate, or accumulates overtime, his pay account will be increased or decreased by debiting or crediting his predetermined total. Inasmuch as the majority of employees during a day will earn their normal pay the pay-roll exception system results in performing the fewest number of operations to complete the pay roll.

Employees in the Government Printing Office are paid on the semimonthly basis in cash over two and three shifts, and each employee must officially sign for his or her pay. All payments are completed the third day following the close of the period.

Summary

The preceding paragraphs have explained only a few of the principal forms and reports used in the routine operation of the cost-accounting system. All other standard reports are prepared from the same source records and all more or less follow the general principles contained herein. It will be realized that the preparation of

special reports requires nothing more than the automatic rearrangement of the original source records into the required sequence and the printing of them in any manner desired.

Accomplishments

An attempt to set down all accomplishments would be impossible because most of the gains are cumulative and continuing. Others are self-evident from the very nature of the report and need no further explanation. However, some of the accomplishments can be indicated, and they will tend to denote the extent of the gains which naturally follow. The purposes set up to be achieved have been reached in full or in part, depending upon the cumulative effect so far obtained.

Scale of Prices

I have stated that the purpose of this installation was to enable the Government Printing Office to do two things:

(1) To bring its scale of prices more nearly in line with actual costs, and

(2) To enable this Office to spot those operations that were not being handled as efficiently as they are handled in commercial plants.

It was found when the costs were all assembled (1) that many of the jobs had, for a long period of time, been charged to the departments at much less than cost and (2) that other jobs were necessarily charged out at prices far above cost in order to make up this deficit. These questions had to be decided: (1) Should this Office continue the old unfair method which let some departments have more work than they were entitled to, or (2) should this Office adjust the scale so that each job would stand on its own feet. Many things were taken into consideration while making this decision, such as: (1) The criticisms that resulted from a comparison of our overpriced jobs with commercial prices; (2) the fact that it was illegal to have the appropriation for one department overcharged in order to make up a loss resulting from an undercharge to another department appropriation; and (3) the fact that while the Office was criticized for the jobs on which it was high, nothing was ever said about the jobs on which it was low. With these and many other points thoroughly considered, it was decided that the only thing to do was to make the changes indicated as necessary by the facts presented through our scientific study and to attempt to weather the storm of criticism which I knew would inevitably follow. When this decision was made, I notified each department of the changes that were being made and the reasons there-

Form No. 426-B

CHARGEAB		STANDARDS		PERCENTAGES		DATE	
MAKE-READY	RUNNING	AVER. M. R. TIME PER FORM	AVER. IMPRESSIONS PER HOUR	NONCHARGE-ABLE TIME	IDLE TIME	MO.	YR.
CYLINDER F*							
AUTOMATI(							
7997	24		2221	10	21		
515	2	15	2124	11	24	7	7
836	1	17	2177	11	33	8	7
1060	1	24	2396	11	15	9	7
1193	1	22	2388	5		10	7
373	2	19	2150	10	25	11	7
215	2	10	2101	4	32	12	7
297	2	6	2211	7		1	8
568	2	10	2268	12	10	2	8
481	2	8	2251	5	9	3	8
790	1	22	2391	12	30	4	8
723	1	29	2150	18	37	5	8
946	1	23	2141	15	30	6	8
7997	24*						

10—2320

Form No. 444

Foundry ----------
Photo-Engraving ----------
Mounting for Photo-Engraving ----
Miscellaneous items ----------

Period ----------

CODE	YEAR (INCLUDING CURRENT MONTH)	
	ATES	SQUARE INCHES
111000(	*	*
121000(	57871	2255809
131000(	4023	1667765
141000(	75834	3649021
1	1428	1217900
	39156*	6193385*
142000(	*	*
2	17	678
	17*	678*
113000(	*	*
123000(	2143	187671
133000(	176	6730
143000(	1970	64905
3	21	2910
	4310*	262216*
	43483*	6456279*

O-113626

Form No. 436-B

CUMULATIVE RECORD OF PRESSWORK

Chargeable Time: Make-Ready	Chargeable Time: Running Time	Chargeable Time: [illegible]	Chargeable Time	Idle Time	Total Possible Hours	Actual Production: Forms	Actual Production: Impressions	Standards		Percentages		Date
CYLINDER FLAT BED MIEHLE HORIZONTAL MACH						5005	22 5					
AUTOMATIC FEED JOB PRESS MACH						5002	22 5					
7997	24001	3191	3817	10634	49040	472	5331504		[illegible]	1	[illegible]	
515	2551	441	400	1253	5160	[illegible]	541950	1	21	11	[illegible]	
836	1934	237	345	1608	5160	[illegible]	411005	1	21	11	[illegible]	
1060	1375	58	307	480	3280	[illegible]	[illegible] 500	[illegible]	[illegible]	11	1	
1193	1919	71	177		3360	54	458351	[illegible]	[illegible]			
373	2153	266	323	1050	4165	[illegible]	47 [illegible]	17	[illegible]	1	[illegible]	
215	2357	373	135	1470	4550	[illegible]	49 [illegible]	10	[illegible]			
297	2864	520	[illegible]		3920	[illegible]	633205	6	[illegible]			
568	2048	222	434	363	363	[illegible]	40448	10	[illegible]	1	[illegible]	
481	2776	515	414	409	4320	[illegible]	504115	8	[illegible]			
790	1513	161	322	1213	4000	33	361757	[illegible]	[illegible]			
723	1077	207	447	1456	3940	[illegible]	231552	[illegible]	[illegible]	[illegible]		
946	1504	70	451	1265	4240	44	32 105	[illegible]	141	[illegible]		
7997	24001	3191	3817	10634	49640	422	5331504					
				...IZONTAL	MACH							

Form No. 111

Foundry
Photo-Engraving
Mounting for Photo-Engraving
Miscellaneous Items

CUMULATIVE RECORD PLATEMAKING SQUARE-INCH PRODUCTION

Report

Period

Code	Description	Current Month: Plates	Current Month: Square Inches	Fiscal Year (Including Current Month): Plates	Fiscal Year (Including Current Month): Square Inches
1110000	BOOK WAX MOLD	4991	194260	5791 1	[illegible]
1210000	BOOK H T WAX MOLD	402	16561	40 3	[illegible]
1310000	JOB WAX MOLD	9580	57197	75834	[illegible]
1410000	JOB H T WAX MOLD	[illegible]	6706	1428	[illegible]
1	TOTAL WAX MOLD	14048*	485124*	[illegible]	[illegible]
1420000	JOB H T LEAD MOLD			17	678
2	TOTAL LEAD MOLD			17*	678*
1130000	BOOK TENAPLATE MOLD	194	7527	143	18 1671
1230000	BOOK H T TENAPLATE	59	2242	176	5731
1330000	JOB TENAPLATE MOLD	437	4713	1970	64015
1430000	JOB H T TENAPLATE	7	866	1	2910
3	TOTAL TENAPLATE MOLD	697*	17348*	431[illegible]	[illegible]
	TOTAL ELECTROS	147450	502772*	143483*	[illegible]562790

Figure 5

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

for in as much detail as possible through means of the following letter:

October 15, 1937.

Sir: In order to place the Government Printing Office on a more businesslike basis, a thorough study covering a period of 18 months has been made of the cost and method of producing each unit of its finished product. This study was made for two purposes: (1) In order that the prices charged for each job would more nearly represent the actual cost to this Office of producing the job; and (2) in order that the Office could, for managerial purposes, have more accurate information upon which to base its manufacturing policies.

Upon completion of this survey it was found that radical changes had to be made in some of the prices charged by the Government Printing Office for its work. It was revealed that some of the units were greatly underpriced and that overcharges to make up these losses were naturally carried by other types of work.

This was due to the prior policy of the Office in raising or lowering the prices for all operations by the percentage by which the receipts for an accounting period exceeded or fell short of the expenses for the particular period, regardless of the fact that due to new inventions or economies in certain directions, certain of the units of production were being completed more cheaply; or, on the other hand, due to changes in requirements certain operations were more expensive. This method of price adjustments had been necessary heretofore because of the lack of sufficient cost information upon which to make proper adjustments and, while it enabled the Office to balance its accounts, had resulted in many inequities.

In order to correct these conditions a new scale of prices, designed along commercial lines and in accordance with well-established commercial practice, is being put into effect as of October 15, 1937. Bills and estimates prepared after that date will be prepared under the new scale and will, in many instances, vary greatly from those previously rendered for similar work. In some cases the charge will be higher, in others lower; but as this is the result of charging each particular department for the type and class of work it orders, I am sure you will agree that it is the only policy to follow.

I would like to emphasize the fact that there has been no general increase in the scale but merely increases or decreases in particular unit charges; and it is estimated that one will practically offset the other. However, it is impossible to predict definitely at this time just how this adjustment will affect a particular department during a fiscal year, as that will depend entirely upon the type of work ordered by the department throughout the year. Generally speaking, I may say that if the requisitions from a department cover a variety of work, its printing bill for the year—for the same amount of work—will be approximately the same as it would have been under the old scale. However, if a majority of a department's requisitions are for work calling for unusual typography or format, or involving much composition and short press runs, its bills will be higher. On the other hand, straight-line work, eliminating unusual features, and involving long press runs, will be lower. Another item that will materially affect the question as to whether the printing bill for a year will be higher or lower under the new scale will be the number of changes made after the jobs are in type (author's alterations), as it has been determined that work of this nature costs the office much more than it has previously charged for the same.

As there are many types of work other than author's alterations that tend to increase the departments' printing costs, such as requisitions for unusual sizes that involve much waste in trimming, requests for a better grade of stock than

that required by the nature of the job, requests for rush work, etc., the Government Printing Office will be glad to cooperate with the departments along these or any other lines indicated by them that will tend to solve our mutual problems.

Respectfully,

A. E. GIEGENGACK, *Public Printer.*

The new scale of prices is in direct relation to actual conditions, and the results of its application will be that each order for printing will stand its just charges. Thus, the total cost of printing for any department will be directly based upon the type of work ordered by it. The department can effect savings by planning its work in conformity with economical methods.

A continuous study is being made of production costs, and the scale of prices is kept current by changes when actual costs change.

Production Control Committee

As stated before, the Jacket Cost Summary reports (see fig. 2, facing p. 10), are forwarded to the computers at the time the charges are being prepared. A review of the operation numbers contained in the summaries indicates the method of production employed on the order. In addition to the fact that the jacket cost report plainly shows the cost of production and the price at which the job is to be billed, the computers are well versed in the various branches of printing and easily recognize uneconomical methods. When such cases arise, a report is made to a committee whose duty it is to investigate the method of production employed to determine whether better methods or procedures could be developed. This committee was created by the Public Printer by order dated December 17, 1937, which reads:

I hereby appoint the Assistant Production Manager as chairman and the Assistant Superintendent of Planning as cochairman of a committee to investigate thoroughly and report on questions as to economical production methods. The committee will consist of three officials. The third member of the committee will be the assistant superintendent of the division involved in the particular question. The Comptroller will refer to this committee all cases in which a comparison of the total cost of producing a job with the prices to be charged to the department for producing the job indicates a material loss to the Office. The questions selected in the manner indicated will raise many difficult and technical questions involving the best method of producing a given job, and their solution will require straight and unhampered thinking as well as a thorough knowledge of all phases of the work; that is, if right answers are to be arrived at and intelligent recommendations made.

There will undoubtedly be questions referred to the committee in which they will find that no improvement can be made in the manner in which the job was handled. But, on the other hand, I believe that the questions raised will show the way to improvements in the planning of the work of many of our unusual jobs and they will unquestionably show up many places in the plant that are not as efficient as they ought to be. This is what I want investigated by this committee.

ATED _____

_____

MAN NUMBER	NAME		RETIREMENT DEDUCTIONS	NET AMOUNT
933		*		
933 933		R		
15354				
24511		R		
41369		R R		
44760		R R		
47018 47018		R		
48520 48520		R		
57219				
57875 57875		R		
60351				
67325		R R		
	999983 71	R*		

FORM R-484
10—2819

O - 113626

PAY ROLL LISTING

☐ DAILY EXCEPTIONS ☐ PAY PERIOD PRE-AUDIT

DATE TABULATED

OPERATOR

MAN NUMBER	NAME	DATE NO	DATE DAY	PAYROLL DIVISION / SECTION / SHIFT	DESIGNATION NUMBER	SYMBOL	RATE OF PAY	TIME	GROSS AMOUNT	RETIREMENT DEDUCTIONS	NET AMOUNT
933		10	04	3 4 1	6 1 1	3	7 5 6	2 00	1 51		
933		10	04	3 4 1	6 1 1	2	6 6 0	8 00	5 28CR		
933		10	04	3 4 1	6 1 1	3	7 5 6	8 00	6 05		
								2 00	28		
15554		10	04	3 4 1	6 1 1	2	6 6 0	2 50	1 65		
								2 50	1 65		
24511		10	04	3 4 1	6 1 1	2	6 6 0	8 00	5 28CR		
								992 00	5 28CR		
41369									5 38CR		
									5 28CR		
44760									5 28CR		
									5 28CR		
47018									[illegible] 86CR		
47018									6 05		
									77		
48520									[illegible] 84CR		
48520									76		
									48		
57219									64		
									64		
47875									4 22CR		
47875									4 86		
									64		
1351									1 65		
									1 65		
61325		10	04	3 4 1	3 9 7	2	1 320	8 00	10 56CR		
								992 00	10 56CR		
	999983 71							1979 00	16 29CR*		

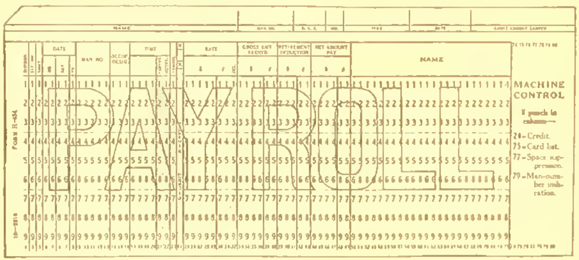


FIGURE 6

O-113416

I have selected the officials indicated above after much thought. I feel that they are well qualified to handle these subjects and I want them to give their best efforts to the questions presented to them and I want their honest opinions as to any methods of improving present procedures of production. If I am not disappointed in the results of this work, I am certain material savings can be made in our present production costs—possibly totaling over a million dollars on an annual basis.

These questions will be referred directly to the Assistant Production Manager, who will call meetings as often as necessary in order to investigate these questions thoroughly and prepare the committee's reports on the same expeditiously. The reports, when completed by the committee, will be returned to the Comptroller for such comment as he may deem necessary before passing them to me for my final consideration.

Miscellaneous Binding

A number of cases have been reviewed by this committee, with the result that large savings have been effected through improved methods, elimination of unnecessary work, and through changes in procedure and materials. This is a continuous study and the results will be far reaching.

As a specific result of the Production Control Committee, I would like to point out the savings that have been accomplished in miscellaneous binding work. Miscellaneous binding is the term applied to a large volume of work wherein old and worn books, magazines, manuscripts, etc., are torn apart, repaired, trimmed, and bound or rebound. This is costly work because it requires careful examination, much hand work, and a high degree of skill. During the past 10 years the annual charges for this work have been approximately $225,000. Until the establishment of the present cost-accounting system no true record of the cost of this type of work was available. A study of summarized jacket cost reports revealed that a large loss, estimated at $70,000 annually, had been suffered on this type of work. Naturally, this loss had been recovered by overcharges on other work. There had been considerable agitation by the departments for a reduction in the charges for miscellaneous binding, but on the strength of this knowledge it could not then be granted. Each operation involved in the work was studied, and plans were drawn up for changes both in type of personnel and in methods of production. Further than this, departments were consulted as to the possibility of changes in general specifications to effect savings. The net result has been a reduction which will amount to approximately $90,000 annually. This will be reflected in a reduction in the charges, not only for miscellaneous binding but also for other work formerly bearing the loss.

DUPLICATING EQUIPMENT

I was particularly concerned during the fiscal year as to the repeated and apparently increasing criticisms of the volume and nature of the printed matter now being put out by the Government. Mistakes are made, of course, and some printed matter not necessary to the proper functioning of the departments is unquestionably being sent out. This matter which gets out through accident or mistake—a small fraction of the total—causes the criticisms we so often hear. Congressman Mead attempted to clear up misunderstandings concerning this subject by his remarks of February 3, 1938, in the Congressional Record, during which he stated in part as follows:

* * * the increase in the volume of Government printing, as shown by the reports of the Government Printing Office, has not kept pace with the increase in the activities of the Government, there being only a 17-percent increase in the same during the last 5 years as compared with a 41-percent increase in necessary governmental activities during the same period.

This small increase in printing is indeed surprising when it is recalled that many of the new activities of the Government, such as the Federal Housing Administration, Unemployment Census, Social Security, to mention only three of many, cannot serve their purpose unless their functions and the service which they were intended to render to the public were made known to the people through pamphlets, books, and other printed media. Under these conditions it would seem that the increase in printing would have been greater than the increase in other Government activities, as it can be readily realized that the new agencies created for the purpose of rendering service to the public must necessarily advise the public as to that service if any benefits are to be derived from their creation and that this would call for more printing than the old-line establishments. But the increase in printing has not kept pace with the increase along other lines, and rather than single out for partisan criticism the comparatively small amount spent for printing, it would seem that the wiser policy would be to question the failure of printing expenses to keep pace with other approved expenses, as I fear that this fact indicates that the activities of the Government, created by Congress to help the public, are not being properly presented to the public through printed media and as a result of this failure to properly inform the public as to the benefits to be derived from the proper use of the instrumentalities created by Congress, the people are not receiving the benefits to which they are entitled. * * *

* * * * * * *

This information is not New Deal political propaganda, but helpful information for all Members, Democrat and Republican alike. That can be readily agreed to by the Member who will examine the facts. As the record stands, both the Post Office Department and the Government Printing Office have done a splendid job, and the Postmaster General, as well as the Public Printer, merit our commendation. They are doing an excellent job.

FORM R-352-A-REVISED
FORM APPROVED BY COMPTROLLER-GENERAL U. S.
JUNE 19, 1936

VOUCHER NO. _____

SHEET NO. _____

PAY ROLL OF PERSONS EMPLOYED IN THE _____ 19____ BOTH INCLUSIVE

NUMBER	NAME Hours and/or days of absence without pay of per annum employees paid on this roll will be stated in this column.	NET AMOUNT PAID	REMARKS
8623	W LESTER BOW	112 09	
11535	AVERY T BRU	144 75	
14289	JOHN T CARRO	112 09	
15149	C ALBERT CHA	112 09	
22531	WILMER R DEL	112 09	
23990	CARL DOEHRER	112 09	
34093	CHARLES W GE	112 09	
40749	SAMUEL C HAR	129 36	
47606	[illegible]	117 [illegible]	
82307	ALBERT C SHA	112 09	
90111	CLAYTON M TH	110 82	
	1735 98		

O-113626

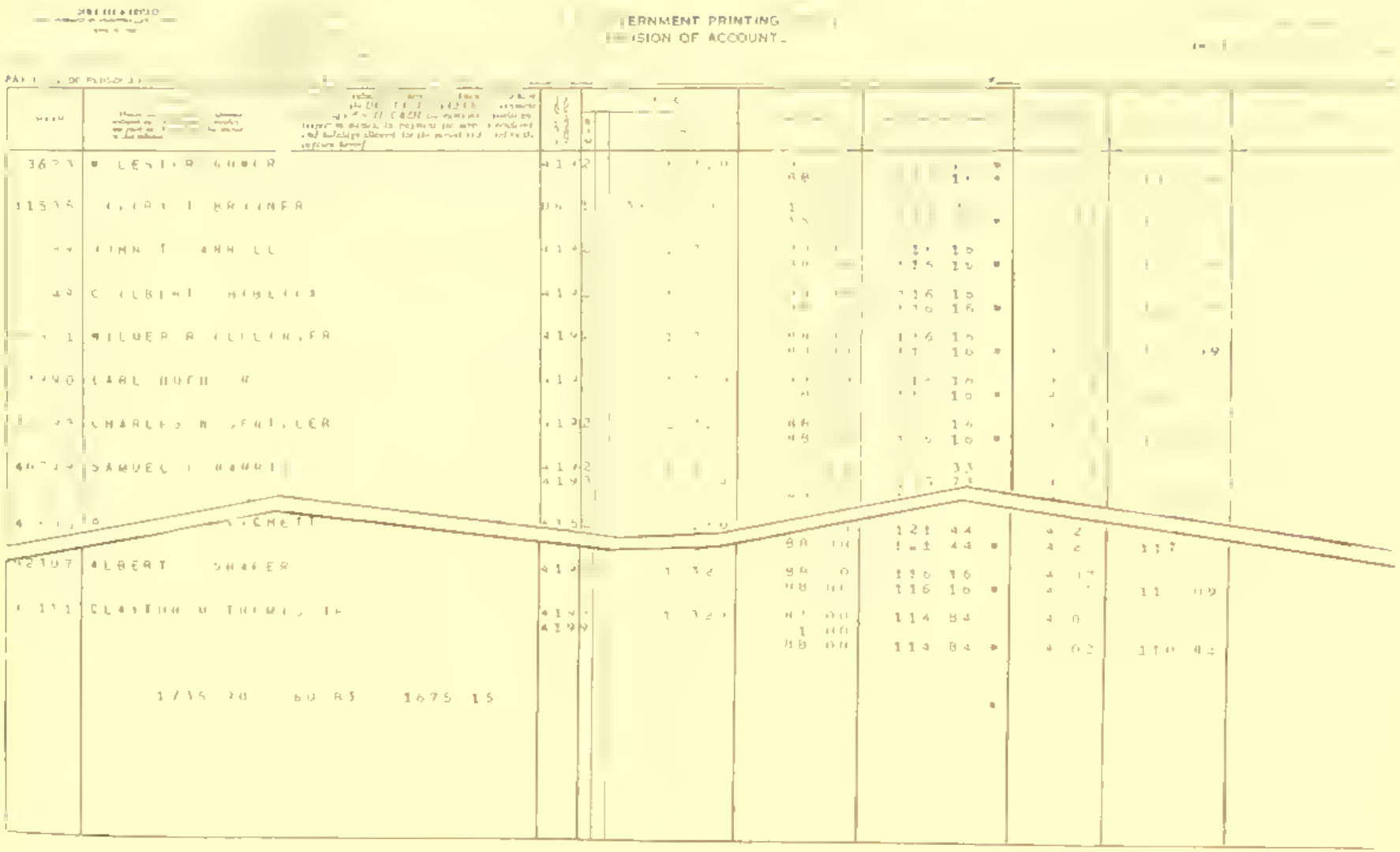


FIGURE 7

Congressman Mead has clearly stated the case. What I fear is: Criticisms of the type and volume of printed matter and efforts by the appropriation committees to limit that matter by reducing the printing appropriations are very definitely increasing the type of material Congress is trying to reduce; for every cut in a printing appropriation is forcing the departments to do more bootleg printing, or printing on their so-called duplicating machines. The result is that the departments turn to other appropriations over which there is no control or limitation from the printing standpoint. This in effect takes work from the Government Printing Office and places it in the departmental printing and duplicating plants. In my honest opinion the law would not be violated to the extent it is today by the departments were it not for the fact that their regular printing appropriations are inadequate to meet their actual requirements. In order to meet their actual printing requirements they buy equipment from other appropriations; thus the equipment is available after actual needs have been met to run off the great majority of the publications which have been made the subject of so many criticisms by Members of Congress and others.

I reported to Congress last year that we were making every effort to limit the work done in the departments on their so-called duplicating equipment because we considered it a direct violation of the law, which requires that all printing be done at the Government Printing Office. Through the departmental printing plants, the departments are enabled to put out more printing than that authorized by Congress by using appropriations made for purposes other than printing to operate their so-called duplicating plants.

I am happy to state that through my efforts and those of the Joint Committee on Printing there were held during the year committee meetings under the supervision of the Bureau of the Budget. Representatives of the departments expressed their views, presented their problems, and earnestly tried to find a satisfactory solution to the problem presented by the rapid growth of the printing plants in the departments necessitated by limited appropriations for printing.

I realize (1) the advantages which can be taken of the present conditions by the departments to get out propaganda of a type that they would not submit to the Government Printing Office, and (2) the

waste of public funds involved in printing this superfluous matter. It was for these reasons that I recommended to the Joint Committee on Printing in my letter dated June 29, 1937, (1) that a committee be formed to decide the type of material that could be handled more expeditiously and economically in the departmental printing plants and the type that for the better interests of the Government as a whole could be handled in the Government Printing Office; and (2) that the Public Printer be authorized to exercise general supervision over the departmental printing plants and to determine (*a*) that unnecessary equipment be not installed, (*b*) that only proper equipment be purchased, and (*c*) that such equipment be used properly.

As a result of the above recommendations and the hearings in connection therewith, the Joint Committee on Printing attempted to clarify the situation and to set up certain lines of demarcation between what could be considered printing and processing by expressing its opinion as to what it termed printing as included in title 44, section 111, United States Code. That its action in so doing was approved by the Acting Comptroller General of the United States is indicated by the following letter from that official:

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, June 1, 1938.

ACTING DIRECTOR,
Bureau of the Budget.

SIR: There has been received your letter of May 6, 1938, as follows:

"On July 8, 1937, the chairman of the Joint Committee on Printing advised this office by letter that action was contemplated, either through the medium of legislation or otherwise, to solve the problems which have arisen from the uncontrolled printing in the departments, and suggested that a special committee be assembled to work with representatives from the Government Printing Office, the Joint Committee on Printing, and the Bureau of the Budget in considering the question as it affects the Government as a whole and to present for approval a plan that would solve the problems in connection with the printing, duplicating, and processing activities and requirements of the various governmental departments and establishments.

"Such a committee was assembled and after numerous meetings and careful consideration of the various phases of the questions involved, prepared a report which was submitted to the chairman of the Joint Committee on Printing with my letter of April 12, 1938. (Copies of report and of my letter of April 12 are enclosed. See p. 14.)

"The first recommendation contained in the report, beginning on page 9 thereof, involves an attempt to clarify the term 'printing' as used in the last proviso of chapter 86, section 11 (40 Stat. 1270).

"I am now in receipt of a letter from the chairman of the Joint Committee on Printing, dated April 29, 1938, in which he indicates that the committee concurs with the idea that a line of demarcation between printing and processing should

be established as a means of reducing the cost of producing matter required for immediate use and of a temporary character, thus preventing what now constitutes a waste of Government appropriations. (Sec. 4, title 44, U. S. C.)

"The chairman of the Joint Committee on Printing, however, suggests that this office submit the definition to you for your comment as to whether it may be followed as a guide in determining whether a particular job involves printing which the existing law would require to be done at the Government Printing Office. I would appreciate an expression of your views in this connection."

You have submitted a copy of the letter of the Joint Committee on Printing addressed to you under date of April 29, 1938, as follows:

"Receipt is acknowledged of your letter dated April 12, 1938, submitting the report of the select committee designated to make a study of the production and distribution methods of printed, processed, and duplicated matter issued by the various activities of the executive branch of the Government.

"The Joint Committee on Printing, at a meeting held on April 13, 1938, considered the report and is of the opinion that it contains many suggestions and recommendations which, if adopted, would greatly improve the printing situation.

"With reference to part 1 of the recommendations (p. 11) suggesting a definition of the term 'printing' the committee concurs with the idea that a line of demarcation between printing and processing should be established because it is perfectly obvious that such a clarification would reduce the cost of producing matter required for immediate use and of a temporary character, and furthermore would ultimately result in great economies, thus preventing what now constitutes a waste of Government appropriations. Under authority of section 4, title 44, of the United States Code, the committee is empowered to employ such measures as may be necessary to remedy any 'waste * * * in the public printing and binding,' and in order to reduce these expenditures to the minimum the committee is of the opinion that the term 'printing,' as used in the last proviso of chapter 86, section 11 (40 Stat. 1270), of the Legislative, Executive, and Judicial Appropriation Act for the fiscal year ending June 30, 1920, approved March 1, 1919 (U. S. C., title 44, sec. 111), insofar as it relates to printing for the executive departments, independent offices, or establishments of the Government in the District of Columbia, or elsewhere, shall include pamphlets, books, documents, periodicals, and other publications of a permanent character, also blank books and standardized forms, but shall not include matter reproduced by what is commonly known as the mimeograph or stencil process, nor shall it include reproductions by other duplicating processes if confined strictly to matter required currently in the performance of functions authorized by law, such as rules, regulations, instructions, opinions, decisions, notices, circulars, statistical statements, and other informational matter, and if no binding, sewing, or trimming operation is involved in connection therewith.

"The committee respectfully suggests, however, that the Director of the Budget submit this opinion to the Comptroller General for final determination as to whether this definition legally may be followed as a guide in determining whether a particular job involves printing which the existing law would require to be done at the Government Printing Office.

"With reference to the centralization of the various types of duplicating and processing equipment in the District of Columbia, the committee hopes that the number of these multilith and multigraph units will be reduced to the minimum and that all equipment rendered surplus as a result of discontinuance or curtail-

ment of the use, consolidations, etc., will be promptly reported to the Public Printer as required by section 3 of the act (41 Stat. 233), approved July 19, 1919.

"The committee will make every effort to secure, as soon as possible, the enactment by the Congress of a law embodying the general principles of the suggested legislation relative to facilitating the sale of Government publications."

While as stated in my decision 16 Comptroller General 111, the word "printing" in the last proviso of section 11 of the act of March 1, 1919 (40 Stat. 1270), is not susceptible of exact definition, it appears that the definition as suggested in the letter from the chairman, Joint Committee on Printing, apparently proposed to be adopted by the committee under authority of said section 11, if not an exact definition of the word, at least clarifies it and sets up certain lines of demarcation between what may be considered printing and processing, and to that extent will tend to remove the uncertainty which has existed heretofore in such matters. Considered on that basis this Office has no objection to the adoption of such definition by the Joint Committee on Printing.

In this connection, with respect to a matter somewhat related to printing, your attention is invited to attached copy of decision of this Office of May 17, 1938, A–21519, to the chairman, Joint Committee on Printing, distinguishing between printing and binding and stock forms or paper articles required to be procured from the Public Printer under the act of June 7, 1924 (43 Stat. 592).

Respectfully,

R. N. Elliott,
Acting Comptroller General of the United States.

RECOMMENDED CHANGES IN METHODS OF DISTRIBUTION

During the committee meetings held under the supervision of the Bureau of the Budget above referred to, the distribution of publications to the public without charge was discussed in detail and it was the consensus of opinion that the generous free distribution was responsible for the waste for which the Government is criticized. The departments have been giving serious consideration to this subject for some time and have agreed that their publications should be offered on a sales basis wherever possible and that free distribution should be limited to official needs. I heartily concur with this view and have been working with the departments in their efforts to solve the problem of distribution, as it is realized that the lack of a simple form of remittance has been the greatest handicap to those who would increase the sale of publications.

Feeling that any increase in sales depends upon the inauguration of an improved method by which the public may purchase publications, the committee developed a system that will, when authorized by Congress, completely revolutionize the distribution of Government publications by (*a*) making it easier for people to buy them and (*b*) decreasing free distribution and all its evils.

The proposed system would require the close cooperation of the

Post Office Department and the Government Printing Office. Incidentally, I am certain that it will increase revenues of both the Post Office Department and of this Office. Briefly, the system would function in this manner:

1. Special postal cards of various cash value denominations designed for use in buying Government publications would be sold by all post offices and rural carriers in the United States.

2. Purchasers would buy the cards, which would be addressed to the Superintendent of Documents, paying in addition to the face value of the card the penny usually charged by the Post Office Department for the postal card.

3. The Superintendent of Documents would accept these cards at their face value in payment for publications.

4. Having filled the orders, the Superintendent of Documents would present the cards to the Post Office Department for redemption and receive from the Post Office Department the amount collected as the face value of the cards.

5. The Superintendent of Documents and the departments would cooperate in the promotion of sales and production of poster lists for display in the post offices.

I am most confident that the committee's plan would lead to many desirable developments. The free distribution of Government publications has long been a knotty problem. Criticisms are directed toward the Government from directly opposed points of view: (1) When free publications are mailed to persons who are not interested, the Government is criticized for spending money on useless matter; (2) on the other hand, there are many persons who would be willing to pay for publications if they did not have to go through the present cumbersome procedure in order to get them.

In addition to the inconvenience of having to write a letter and of going to the post office for a money order, a person who desires a 5-cent publication has to spend at least 14 cents to get it, in that he has to place a 3-cent stamp on the letter and pay the money-order fee of 6 cents. He then addresses the envelope, often without knowing exactly where to send it, and, if the letter is addressed erroneously, waits unduly long for the publication while his message is routed and rerouted through channels in Washington.

The plan developed by the committee would end such confusion and would also have many other desirable effects, such as these:

1. In the past the public has generally thought of Government publications as free matter—something of little value. A convenient sales system would change this psychology and the public would soon

develop the habit of purchasing these publications and would appreciate them more if it could buy them with little trouble.

2. The executive departments would feel less inclined to distribute their publications free. They could, therefore, make savings in the cost of information distribution. Moreover, the system would tend to encourage the issuance of publications really desired by the public as the departments would undoubtedly pay more attention to their editorial policies if they were dependent upon sales for the distribution of their printed matter.

3. The revenues of the Government Printing Office would be increased materially.

4. The revenues of the Post Office Department would be increased through the sale of the postal cards, as it is estimated that at least five times as many orders would be received.

5. Post-office losses would be reduced not only through a sharp reduction in the volume of printed matter handled under frank by the Post Office Department but also, as the card will be used in lieu of money orders now drawn in small amounts, the loss in handling money orders will be sharply reduced.

6. Criticisms that various branches of the Government are sending out volumes of propaganda would be minimized, as the system would definitely reduce the number of publications going to persons who do not want them. On the other hand, interested persons could get the publications they wanted at a cost they were willing to pay and without going through the complicated procedures now necessary in order to get them.

The above is simply a brief outline of the plan and enumerates only a few of the desirable results which, I believe, will result from its adoption. A great deal of thought has been given to the details by representatives of many of the departments. Practically all who have considered it are enthusiastic about it and are convinced that it is an efficient, workable plan which will prove of value to the Government and to all persons interested in obtaining information through Government publications. The details could be worked out to the satisfaction of all concerned, and the interests of the Post Office Department, upon which would fall a great part of the burden, could be properly protected by requiring that all rules and regulations governing the carrying out of the plan would be approved by the Postmaster General.

I earnestly recommend that Congress give serious consideration to the adoption of this or some similar procedure that will provide a method by which the public may purchase Government publications

cheaply and easily, as such action will reduce the criticism now directed at the Government along these lines and will enable the Post Office Department and the Government Printing Office to render better service to the country as a whole and will in the final analysis increase the revenues of the Government.

PATENT OFFICE PRINTING

There was a decrease in the number of patent specifications printed in 1938 as compared with the number printed in 1937. The total printed in 1938 was 52,714 as compared with 56,142 in 1937. The number of pages in 1938 totaled 140,183 as compared with 152,259 in 1937. There were also printed during the year 171 decisions, 188 disclaimers, and 34 certificates of correction.

The Official Gazette, issued weekly, made 13,768 type pages in 1938 as compared with 14,612 pages for 1937. For the Gazette 51,059 illustrations were made. The total number of copies of the Official Gazette and Annual Indexes printed in 1938 was 227,607 as compared with 236,944 in 1937.

There arose during the year in connection with the Patent Office work an interesting and unusual situation that could have proved not only exceedingly expensive to the Government as a whole but also disastrous to the proper functioning of the Patent Office had the activities of those responsible for creating this condition not been checked before it was too late.

The first indication that the Government Printing Office had of the seriousness of the situation was the appearance of the following paragraph in House Report 1830, Seventy-fifth Congress, third session, a report from the House Committee on Appropriations on the State, Justice, Commerce, and Labor appropriation bill for the fiscal year 1939:

> At the request of the committee made during the course of the hearings on the appropriations for the Patent Office last year the Commissioner of Patents submitted to the committee the results of a study made on the matter of cost of printing patent specifications and the Official Gazette. It appears that by the use of certain offset methods of printing, savings could be made in excess of $100,000 in the annual printing bill of this Bureau. A responsible private firm in business in Washington for over 20 years has made an offer to do this work by use of offset printing methods at the savings indicated. To permit this to be done requires legislation, as under the present law all Government printing must be done in the Government Printing Office unless the Joint Committee on Printing directs otherwise. It is sincerely hoped by the committee that this whole problem of use of new printing methods will be given an early consideration by the Joint Committee on Printing in order that economies running into hundreds

of thousands of dollars annually can be accomplished. A reduction of $100,000 in the Budget estimate is recommended in the expectation that a saving of not less than this sum may eventuate from such action as may be taken.

It is assumed that the allegations made to the individual members of the Appropriations Committee by those seeking to undertake the reproduction of the patent specifications and the reproduction of the Patent Office Gazette were similar to the allegations made in a letter to the Commissioner of Patents under date of April 30, 1937, by an attorney representing at that time an undisclosed principal. The letter is as follows:

On behalf of my clients I hereby confirm the proposal heretofore submitted verbally to you for the composition and photolithographing of the patent specifications at $4.48 per page.

Your report for 1936 shows that you paid the Government Printing Office $740,596 for approximately 130,500 pages of patent specifications, which amounts to $5.68 per page, approximately.

You will therefore note that our proposal will save your Bureau on patent specifications the sum of $156,000 per year, approximately, on the basis of your 1936 requirements.

We also confirm our proposal to compose and photolithograph the Gazette at a saving, approximately, of $12,000 per year over the amount which you paid in 1936 to the Government Printing Office.

This makes a total saving on both the specifications and the Gazette of $168,000 per year, approximately, based on your 1936 requirements.

We will be prepared to make a firm and definite proposal at such time as you desire, upon which a 1-, 2-, or 3-year contract may be based.

We attach hereto specimen pages showing the quality of work we propose to do for you.

The above letter was supplemented under date of November 23, 1937, by another addressed to the Commissioner of Patents by the same attorney disclosing the attorney's principal and making some general statements as to how his company proposed to handle the work. The significant part of the supplemental letter, however, is that which indicates that the saving to the Patent Office would not be as great as originally stated. In the letter of April 30 a saving of $168,000 a year was promised, whereas the supplemental promised only $106,500, as is shown by the following quotation therefrom:

In the fiscal year 1936 approximately 150,000 pages of specifications were printed. On the basis of the average present cost, viz, $5.11 a page, this is a total cost of $766,500. On the basis of our proposal of $4.48 per page, the cost for the same number of pages would be $672,000. This indicates a saving of $94,500.

* * * * * * *

As compared to the most recent figures available to us, this proposal for reproducing the Patent Office Gazette indicates a saving to the Patent Office of approximately $12,000 per annum.

This promised saving of $106,500 was later reduced during the hearings to $94,500 through the kindness of the company's representative to the Government Printing Office employees engaged in producing the Official Gazette. This is indicated by the following quotation from his testimony before the Joint Committee on Printing:

> * * * we have a high regard for anything that would bring about the displacement of men, and we have come to the conclusion that is would be better to leave the Gazette as it is now, or as work that should be done by the Government Printing Office.

While the company thus expressed concern as to the positions of the few employees engaged on the Gazette, it apparently did not feel as kindly disposed toward the many engaged on specifications. It is just possible that this may be due to the fact that it had begun to realize the difficulties of the job and had found that no profits could be made on the Gazette and that such realizations and findings had not had time to filter through with reference to the specifications.

Hearings on the subject were held by the Joint Committee on Printing on April 18 and 20. The hearings were open to the public, and the company representatives, the Commissioner of Patents, the Public Printer, and all interested parties were invited to testify by the chairman. He opened the hearings by stating that its purpose was to consider the general subject of printing for the Patent Office and inserted in the record among other things the proposals submitted by the company.

The first witness called to the stand was Mr. Conway P. Coe, Commissioner of Patents. Mr. Coe stated that when a change in the character of printing was presented as a means of effecting economies in the Patent Office he was naturally interested, but recognizing his unfamiliarity with the technical problems involved and his want of authority to decide the questions of law and policy concerned, he referred the matter to the Joint Committee on Printing for its consideration. He emphasized the fact that he was not making a recommendation in the matter, as is indicated from the following, which is quoted from his testimony:

> Lest there should be any misunderstanding on the part of the Congress, the Public Printer, or others, I wish to emphasize, first, that I have carefully and consistently refrained from pronouncing as to the manner of doing the printing needed by the Patent Office, and, secondly, that I have never intended to corroborate and do not now confirm the claims made in the proposal as to the economies likely to result from its acceptance.

With the idea of being helpful to the committee the Commissioner submitted statistics with reference to printing costs in preceding years

and stated that the studies made of the samples submitted by the company indicated that they would be satisfactory. He pointed out that he had not investigated the company to determine whether it could give him the same service that he was receiving from the Government Printing Office, as he had not looked into its facilities, its financial set-up, its equipment, and personnel to satisfy himself on these points. He stated that he had not done this as he naturally assumed that the contract would be awarded only as a result of competitive bidding and that an investigation of one concern would not assist in the selection of the ultimate bidder. He also pointed out that the risks and difficulties involved in the adoption of the new method of handling the work and all other considerations would make any saving much below $100,000 a year rather unattractive from the standpoint of the Patent Office. In conclusion he stated that there was no reason to change either from the standpoint of service or the quality of the work, adding:

> I do not know that we have ever had a period when we were getting better work or more efficient cooperation than from the present Public Printer.

Following Mr. Coe to the stand were four representatives of the company seeking the contract, a gentleman who identified himself as its counsel, another who stated that he was secretary-treasurer of the company, and two others whose official connection with the company was not made clear during the hearings. These gentlemen identified the proposal and the company with which they were connected, explained in a general way the methods which they proposed to use in producing the work, attempted to answer objections which they felt would be raised against their proposition, and made a very persuasive appeal to the committee to award the contract to the company without competitive bidding for a period of at least 2 or 3 years—alleging that it would be difficult to write specifications (designed for the protection of the Government).

Following the company representatives, Mr. Clyde M. Mills, representing the five printing trades unions comprising the International Allied Printing Trades Association, was invited to testify. Mr. Mills appeared to oppose the printing of patent specifications and the Gazette outside the Government Printing Office. He outlined in a comprehensive and well-prepared brief: (1) The nature of the drive extending over a period of years that private interests have made to divert the work from the Government Printing Office; (2) the drastic economies already made in the printing of Patent Office work; (3) that glowing estimates of savings possible by the use of duplicating

machinery, inaccurate computations in the cost of such machinery, and the desire of salesmen to make sales have resulted in a misdirected campaign to effect actual savings in printing costs—such savings, if and when effected, having been effected only at the expense of Government Printing Office employees; and (4) the type of propaganda put out by the proponents of the proposal then under consideration.

Mr. Mills quoted from page 246 of House Document No. 360, Seventy-fifth Congress, first session, entitled Technological Trends and National Policy, to the effect that there has not yet been firmly established a completely acceptable substitute for linotype and monotype composition. This quotation continues:

> When the problem of the justification of the length of the type line is fully solved, the process of photocomposition may displace the use of metal in printing types to a large extent.

Mr. Mills pointed out that this should prove that the problems of variable spacing have not been finally solved. He told the committee that the printing trades unions were not opposed to the development of new processes in the industry, but that they did not believe that experiments in the development of new processes should be made by the Government solely on estimates at the expense of those now dependent upon employment in the printing industry. The concluding paragraphs of Mr. Mills' brief are as follows:

> The printing-trades unions do not believe the Government should install such new processes until they are established and accepted by the printing industry. Neither should the Government subsidize the acceptance of such machines by allowing a contract to a concern whose sole experience in the use of such machines has been limited to the operation of one machine.
>
> If new processes are established and are successful in the industry, the wage rate and the qualifications of the operators will follow as a natural result.
>
> In the case of printing patent specifications there are a number of mathematical equations which are very intricate and which require a great degree of skill on the part of the person engaged in producing this type of printing. The manufacturer of the verityper machine and manufacturers of other such substitute processes have long indicated and argued that the advantage of the new processes lies in the reduced cost of labor by the employment of unskilled mechanics at lower wage rates. The experience of the teletypesetter is such as to discount most of such claims.
>
> The investment of the Government in machinery for the Government Printing Office to produce the necessary printing must be given serious consideration. The investment of the employees of the Government Printing Office measured in years of training and in loyalty to the Government should be weighed against the desires of those who seek a contract primarily to effect a sale of machinery not generally accepted or proved to be successful in the production of printing similar to patent printing.
>
> Profit from the sale of a machine and a commission to those who influence such

a sale are unimportant except to those who desire such a profit or commission. In this case it would be a subsidy from the Government.

All the foregoing factors must be given the consideration they deserve. If there must be experiments, let the experiment be carried on by the Joint Committee on Printing and the Public Printer. Utilize the years of experience, manpower, and employee training to determine the value to the Government.

The insistent demands for the contract to do the printing for the Patent Office when the proof of value is so accessible makes more conclusive our belief that there is more involved in the question than the saving of $100,000 to the Government.

Upon the conclusion of Mr. Mills' testimony, Mr. Granger G. Sutton, chairman of the legislative committee of the employees of the Government Printing Office, and Mr. Paul Scharrenberg, national legislative representative of the American Federation of Labor, appeared to express the views of their organizations. Their testimony was to the effect that they had been authorized and directed to appear before the committee to support the protests of the printing trades against the proposed change, as their respective organizations were of the opinion that if circumstances required a change in technical appliances and method of production it could well be made within the Government Printing Office proper.

Upon the conclusion of Mr. Scharrenberg's testimony the committee adjourned until Wednesday, April 20, 1938, at which time the committee met at 10:30 a. m., with the chairman, Hon. J. Walter Lambeth, presiding. The chairman called the committee to order and stated that it would be glad to hear the Public Printer with whatever statement he cared to offer.

I was glad to have an opportunity to present the facts in this case as they appeared to the Government Printing Office and to thank the Commissioner of Patents for the attitude he had taken in the matter and for his statement that he was then receiving more cooperation and better work from the Government Printing Office than the Patent Office had ever received. I was glad also to thank the Chief Clerk of the Patent Office, Mr. Brearley, for bringing out during the hearings the point that the Government Printing Office has never been late in a delivery. This attitude on the part of the Patent Office was appreciated and made my task more pleasant than it otherwise would have been. I trust that it is only the forerunner of a closer spirit of cooperation and helpfulness between our two offices, and that the mud-slinging, charges, and countercharges which were the practice before my administration, as indicated by the correspondence files, are a thing of the past.

With reference to the quotation from the report on the Commerce appropriation bill to the effect that it hoped the Joint Committee on

Printing would give consideration to the whole problem of new printing methods in order that economies running into the hundreds of thousands of dollars could be effected, I am glad to report that the Government Printing Office was at that time making every possible effort to determine the cheapest and best way to produce every job submitted to it. I was at that time and still am chairman of the research commission of the commercial printing industry. We are engaged in experiments in all fields relating to printing, with funds provided by the industry itself. The commission has employed and placed in the Government Printing Office a research associate and an assistant without cost to the Government, who will work with our experts in developing new and better ways of handling the work, with the idea that the Government will have unquestioned rights in any procedures developed. The industry will likewise benefit by new developments which may prove satisfactory. I doubt that any more can be done to develop, test, or try out new printing methods than the Government Printing Office is now doing or planning to do. I will not enumerate the improvements we have made or are making, as most of them have been pointed out in my annual reports or in hearings before the various committees.

The company representative paid me a very high tribute in pointing out the fact that I was a practical printer with long experience and one in whom confidence could be placed. Realizing my responsibility to the Government and to the employees of the Government Printing Office, I wanted to make certain that facts which should have been brought to the attention of the committee were not overlooked. I could not understand why any firm would seek this contract for the price stated if it knew the type of work involved and the conditions under which the work had to be performed, or how a company with a paid-in capital of only $107,000 could finance a proposition of this kind which would have required the employment of over 200 more people, the rental of ten times as much space as it then occupied—with space at a premium in the District of Columbia—increase its equipment 3,400 percent, and carry all this additional pay roll and rental expense through the training period necessary to develop its employees to the point where they were able to take over the work. As a practical printer I would have thought that I was headed toward bankruptcy were those conditions facing my organization.

In this connection my concern was not so much for the company as it was for the Government, as I could clearly visualize the loss to the Government, the inconvenience, and the general confusion that would result from a failure of the company and the reestablishment of the

work in the Government Printing Office after the Patent Section had been closed out.

Aside from the financing angle, and again as a printer, I was most anxious to hear a description of how the work was to be handled, but no mention as to how the work was to be done was made other than a general statement that it could be produced on the typewriter. I pointed out to the committee that if the company was able to reproduce technical patent specifications involving mathematical equations, chemical formulae, etc., why were not samples of that work produced for inspection by the committee. There had been general statements to the effect that employees could be trained in two weeks to handle easily this involved copy, but no samples of involved copy were produced. As a matter of fact, it was seriously doubted that the company was familiar with what it was proposing to do; its ability to produce the type of technical matter involved within anything like the time limits allowed by the estimates submitted was also doubted. With these doubts in mind the approval of a contract could not be recommended without more evidence as to the financial condition of the bidding concern, its ability to produce the type of work in question in the volume and in the time allowed for its production, and more specific evidence as to the method of producing the work.

Commissioner Coe pointed out that the Patent Office would not be interested in the proposed plan if it would not save at least $100,000. This was a logical stand for the Commissioner to take, and I heartily agreed with him that consideration should be given to any plan that would effect such a substantial saving. Assuming that the proposed plan would have saved $100,000 in the annual cost to the Patent Office, it was my duty to look at the proposal from a broader viewpoint—from that of the Government as a whole. Certainly no plan proposing a saving in one department which is counterbalanced by equal increases in other departments is worthy of consideration. By analyzing the facts we found that the total cost to the Government of the Patent Office printing has averaged $890,000 per year for the last 3 years. This amount was spent with the Government Printing Office. If the work had been taken out of the Government Printing Office it would have naturally meant $890,000 less sales by the Office. Any Government Printing Office sales figure represents average actual cost; that is, the figure is a sum of the materials and labor used on an average basis to produce the specific units involved in the job in question. If $890,000 in sales had been taken away from the Office, it would have been necessary to reduce our total expenses an exactly

similar amount; otherwise the Government expense for printing would have increased.

I would have been compelled to release from the rolls all employees engaged directly on the production of patent work either in a mechanical, clerical, or supervisory position and would have ceased to purchase all materials necessary for use in the patent work. This total reduction would have amounted to $730,000 and would have left a balance of $160,000 which represented indirect charges that could not have been allocated directly to any specific phase of Patent Office work—it was overhead and other indirect expenses.

In a plant the size of the Government Printing Office, or in any large manufacturing plant, administrative or overhead expenses do not increase or decrease in direct relation to direct expenses. This is not peculiar to the Government Printing Office, but is a cardinal rule in business administration. However, through the extreme need for action it might have been possible to reduce this $160,000 by reassigning administrative duties, reducing the administrative force, or, in short, a complete retrenchment of the existing organization. The most that could have been hoped for in this connection after releasing the patent work would have been a reduction of $70,000 in the indirect expenses now carried by the patent work.

This left $90,000 in fixed expenses which could not have been written off. The Government Printing Office would, therefore, have been compelled to raise its prices to other departments in order to recover the additional $90,000. It follows that if the Patent Office had saved $100,000, the other departments of the Government would have incurred an additional $90,000 increase in the cost of their printing and binding.

Had the patent work been transferred to a commercial concern, the sale of the Gazette, now handled by the Superintendent of Documents, would have reverted to the Patent Office, as the Superintendent of Documents is not authorized under the present law to sell publications other than those printed in the Government Printing Office. The sale of the Official Gazette was transferred from the Patent Office to the Government Printing Office as a result of an agreement brought about by the Patent Office. The purpose of the agreement was to relieve the latter of the expense of handling the sales and to permit the sale of the Gazette at cost, plus 50 percent, rather than at the heavy loss resulting from the sales made under the restrictions placed upon the Patent Office. This has prevented a loss to the Government of from $11 to $13.75 on each subscription to the weekly Patent Office Gazette and has added over $40,000 a year to the receipts from sales. A

return to the old plan, which would be necessary under the present laws, would have thus reduced receipts from sales approximately $40,000.

The company stated that it did not wish to work an undue hardship upon our employees and that it did not want to compel us to reduce our force any more than was actually necessary. As evidence of this they stated that they were willing to permit us to continue to produce the Gazette. I supposed that they were including in this the extra copies of the Weekly Index, which is also another phase of patent work. This was another clear indication that the company had not been advised as to the work involved; otherwise, I am certain, they would not have made such a proposition to the committee.

I outlined in detail to the committee the technicalities involved in producing the specifications, the Gazette, and the Annual Indexes of Patents and Trade-marks, and how the production of one was dependent upon the production of the other for economical results, and supplied figures from the records of the Government Printing Office covering past performances, showing that the production of the Gazette in the Government Printing Office as a separate item would have added $68,913 to its cost.

From the above it will be seen that the adoption of the proposal would have, instead of resulting in a saving as alleged by its proponents, placed an additional burden upon the Government; but before concluding, I pointed out the additional burden that would have been placed upon a small private concern by the uncertainty of the volume of work to be handled in a given time. This would necessitate carrying a sufficient number of employees to handle the peak load, with the resultant lost time when the work was slack, or a tremendous turn-over of the hiring and firing of employees, with the added expense of training new employees. This is a matter in itself that would make a practical printer reluctant to undertake a job of this kind. Fluctuations in work can be handled in an organization of the size of the Government Printing Office, as it must of necessity have a flexible force in order to meet the demands for service placed upon it. It handles this situation by transferring the employees from units in which the work is slack to units in which the demands are heavy, or by granting annual leave to employees during a slack period.

Another point that I emphasized was that brought out briefly during the testimony by Mr. Mills relating to unusual temporary demands upon the Government Printing Office. In this connection I pointed out that the Government Printing Office did not have to expand its force, plant, or equipment to meet temporary and unusual

requests, as such work, under the law, could be released by the Public Printer to commercial concerns; and the Public Printer, under this authority, releases all work which, in his opinion, cannot be economically or suitably handled by the Government Printing Office. If in his opinion, and under this authority, the patent work could be more economically and efficiently handled by a private contractor, the Public Printer could, after competitive bidding, award the contract to the successful responsible bidder.

Upon the conclusion of my testimony the company representative asked for and received permission to study the same and to file a brief in reply thereto. This brief was filed under date of May 2, 1938, and was referred to me for consideration and reply. The brief was so full of vituperation and showed such a complete lack of understanding of the problems involved that it required very little comment. There was one point, however, in the brief that might have been misleading to anyone not familiar with printing. This was the section which dealt with the estimates I had made as to the increased costs that would have been involved in producing the Gazette as a separate item, and it is the only point covered in my reply to the Joint Committee on Printing, which was as follows:

I have given careful consideration to the brief filed by Mr. ———, counsel for the ———— Co., under date of May 2, 1938, and find in the brief nothing that would cause me to desire to make any change whatsoever in the statement made to your committee on April 20. The facts presented at that time have been carefully checked and rechecked and found to be correct.

While I do not desire to dignify Mr. ——— brief by denying any of the misleading allegations contained therein, I would like to refer briefly to that portion which deals with my estimate of the increase in cost that would result from a return to the old system. On May 3, 1933, the Joint Committee on Printing recommended to the Secretary of Commerce that—

"the Printing Office use a size of type (possibly Record type) which will meet the needs of both the text of the specifications and the Official Gazette so that only the removal of the leads from the specifications would be necessary in order to print the Gazette."

The Secretary of Commerce designated a special committee to consider the recommendation, and after a thorough consideration the special committee reported under date of May 20, 1933, as follows:

"The committee gives enthusiastic approval to the suggestion that a face of type be adopted for specifications that can be further used in printing the Official Gazette on a pick-up basis. It is believed that by the adoption of this suggestion a saving of approximately $100,000 a year will be accomplished, and it is believed that much credit is due the chairman of the Joint Committee on Printing for this fruitful suggestion."

It will thus be seen that the present system used in printing the Gazette was installed as the result of a recommendation made by the Joint Committee on

Printing, which was approved by the Secretary of Commerce with the idea that it would save approximately $100,000 a year. That the estimate as to the saving was conservative may be established by referring to the Public Printer's annual reports for the fiscal years 1933 and 1934 and by comparing the figures shown therein as applicable to the Official Gazette (pp. 109 and 27, respectively). Such a comparison reveals a saving of $5.34 per page. This fact would have justified an even higher estimate of the cost of returning to a system that would necessitate the abolishing of the Patent Section and the handling of the Gazette as an entirely separate and distinct proposition, including the resetting of all the type carried therein. But I felt that economies effected and new methods recently adopted throughout the plant would enable me to handle the Gazette for the figure quoted.

The other allegations in the brief are completely ignored, as I feel that their character is apparent and that further comments are unnecessary unless you desire the same.

Attempts such as the one outlined herein to undermine the Government Printing Office and to throw Government work into commercial fields, regardless of the consequences, are doing more than any other one thing to lower the morale of the employees and are making it more difficult for us to carry out the plans we have in mind for more economical and efficient production, as such plans call for the wholehearted cooperation of our employees, and such cooperation cannot be expected when the employees are faced daily with the thought that the work upon which they are engaged is going to be taken away from them and that they will lose their jobs. I believe that it would be to the better interests of the Government as a whole definitely to reestablish the policy that all Government printing should be done in the Government Printing Office, under its supervision, or procured through it, holding the head of that organization responsible for the satisfactory operation of the Government plant and the production and procurement of Government printing.

OUTSTANDING JOBS

The efficient and important part the Government Printing Office took in the National Unemployment Census speaks well for the high degree of cooperation between its divisions and the fine spirit of application to jobs in hand by individual employees—their interest, skill, and cooperative spirit. It once more demonstrates the ability of this Office to meet large and urgent demands even ahead of department expectation and without disrupting the orderly production on other current jobs flowing through the Office. On September 27, 1937, the Government Printing Office received copy for one of the largest single printing orders ever attempted for the Government—the Unemployment Registration Card.

The jacket originally called for 60 million copies, 8 by 9 inches, to be printed and delivered by October 31. Later this number was increased to 85 million. By 11 a. m. the same day the copy was received, the type had been set, read and corrected, and proof submitted to the department. Due to the many changes made on the returned proof it was necessary to reset the job and to submit to the department another proof. An approved departmental proof was returned to this Office Friday afternoon, October 1. The form was corrected, revised, locked up, and sent to the Foundry by 5:30 p. m.

Tenaplate patterns were molded and put together two-up. The regular night force finished the patterns and proceeded with the molding of the plates. Knowing the number of impressions wanted and the character of the stock, instructions were issued to give the plates a good shell of both copper and nickel. This, of course, required extra time in the depositing tanks. The Molding and Finishing Sections by working 8 hours, Saturday, October 2, had the entire job (16 press loads of 80 faces and 80 backs, 2-up on each) in the Job Composing Room by 4:30 that same afternoon. The reserve plates were finished Monday morning before 11 o'clock.

In the meantime a practical and satisfactory fold—one that might facilitate bindery operations—was made up and submitted to the department for approval.

All materials necessary for the lock-up for press were arranged and all hooks located in position before the plates were received from the Foundry. The Job Composing Room completed the imposition of the 320 plates in 2½ hours. The Pressroom started this job about 10:30 a. m., October 4, and averaged better than 4 million cards a day for 21 days (size of sheet, 32½ by 45 inches, 20-up, face and back, cream post card bristol), completing the 85 million on November 1. The size and weight of this stock did not retard the production to any noticeable degree. The press average for this run was 1,500 per hour. This includes oiling and all stops. It is also interesting to note that just one set of nickel-face electros was necessary for each press run of 525,000 impressions.

The Pamphlet Section of the Bindery started folding, cutting, banding, and packing in the late afternoon of October 4, and completed the 85 million on November 3. The production of this order was performed in record time, namely, 168 hours day and 168 hours night, or a total of 336 hours in the Bindery.

In addition to cutting and folding 85 million cards, the Bindery had to staple 42,500 carton containers in which they were packed for delivery. Two thousand copies were contained in each carton; 850

pounds of No. 33 rubber bands were necessary to bind them in bunches of 100; 467,500 feet of 3-inch gummed paper tape were used for sealing cartons; and 325 pounds of wire were required. In all, 42,500 packed cartons, weighing 42 pounds each, totaled 892½ tons.

The Superintendent of Stores reported receiving approximately 51 cars of stock, amounting to 4,307,825 sheets, weighing 1,841,940 pounds.

Due to the fact that this paper was delivered on skids there was no delay due to presses waiting for stock, as power trucks could deliver a carload to the pressroom in 20 minutes when necessary.

The Documents Section used 42,000 mail sacks in mailing this job, and in addition they prepared all the mailing franks and sack tags. The first delivery was made as of October 5 and the last on November 3.

Upon the completion of the job the following letter was received from Mr. John D. Biggers, Administrator, Census of Partial Employment, Unemployment and Occupations, Department of Commerce:

> The important part taken by the United States Government Printing Office in connection with the National Unemployment Census speaks for itself. The printing and shipping on schedule of 85,000,000 unemployment report cards captures the imagination.
>
> Many other pieces of work which your organization undertook for us in conjunction with and following that tremendous job, such as printing and mailing post-office instructions, informational pamphlets, foreign language posters, and the enumerative schedules were handled promptly and effectively by your personnel in spite of the great pressure.
>
> My Assistant Administrator, Mr. Frederick F. Robinson, who had personal contact with Mr. Mitchell, Superintendent of your Planning Division, and his night assistant, Mr. Robinson; Mr. Tisdel, Superintendent of Documents; and Mr. Benner, Superintendent of the Shipping Department; tells me that these men and the people working under their direction were an inspiration to work with. Without their fine spirit of cooperation our task would have been infinitely more difficult.
>
> My responsibilities while in Washington have prevented me from meeting personally many of the officials of the departments who have carried on so valiantly for us. This misfortune is one which I regret deeply even though it was unavoidable. I wish you and your able assistants to know in what high regard the things which you have done for us are held and to thank you all for the great help which you have given me.

Another job that reflects credit upon the employees of the Office is their unusual printing accomplishment in connection with the President's referenda of cotton and tobacco growers. The act was signed by the President February 16; the date of the vote was set for March 12. In order to hold these referenda it was necessary not only to print all forms needed in connection therewith but also to deliver these

forms by the date set to many counties in the several States involved, some as far distant as California and Texas. There were 28 different jobs—ballots, instructions, informative material, etc., aggregating over 4,560,000 copies. The first copy reached the Office February 18. By March 4 the bulk of the material was in the mail. The small remainder was on its way by March 8.

Upon the completion of this Mr. H. R. Tolley, Administrator, Agricultural Adjustment Administration, United States Department of Agriculture, addressed the following letter to the Public Printer:

> Once again I take pleasure in expressing to you and your associates my thanks and appreciation for completing what we consider a very unusual accomplishment.
>
> The problem in brief was as follows:
>
> In order to carry out certain provisions of the Farm Act, signed by the President on February 16, it became necessary to hold referenda among the cotton and tobacco growers of the country as quickly as possible. The date for the vote was set for March 12.
>
> In order to hold these referenda on that date it was essential that a considerable amount of printing be not only procured from the Government Printing Office but also delivered in counties in States as far distant as Texas and California considerably before that date. There were 28 different print jobs—ballots, instructions, informative material, and other supporting forms, the total amounting to several million pieces. The first copy reached the Government Printing Office on Friday, February 18, the remainder following rapidly. By Friday, March 4, the great bulk of this material was in the mail and the small remainder was on its way by March 8.
>
> We realize that this extremely commendable piece of work could be accomplished only by the most efficient type of cooperation on the part of a large number of your departments and associates and we hope that some word of our appreciation may reach them.

The Federal Register is a daily publication that usually averages not in excess of 16 pages and is produced in the same manner and on the same equipment as the Congressional Record. As an illustration of the fluctuation of the work in the Government Printing Office and the spirit of cooperation that must exist among its employees in order to meet unusual and unexpected demands, I would like to point out that the Federal Register for December 3, 1937, required composition work on 695 Office folios, making a 100-page Register. The entire task was completed between the afternoon of December 1 and midnight of December 2 without interfering in any way with the schedule of production of a 101-page Congressional Record for December 1 and a 126-page Congressional Record for December 2 and other rush current work. The job was rendered more difficult by the fact that it was 53 percent tabular matter, requiring the setting of 500,000 ems of tables.

On November 26 the first of the schedules for the Census of Manufactures, 1937, and the Electrical Industries for the same year was received in this Office. These schedules numbered 153 in all, each averaging about six 8 by 10½ pages, or approximately 950 pages.

The mere size of the above order was in itself enough to render it impressive, but upon learning that complete delivery was required by the 1st of January the proportions of the job loomed even greater.

It was readily apparent that here was a piece of printing that was going to test the facilities of the Office if it were to be carried through without interfering with the regular run of work. It was one which was to tax its ingenuity, its planning ability, and its organization. It was recognized as a challenge to each individual. The answer to that challenge and the spirit in which it was accepted may be found in the record of the handling of the job. I point to these achievements in a spirit of pride, as I feel fortunate in being placed at the head of an organization made up of so many loyal and capable workers. No one is more conscious than myself that such results may be accomplished only by wholehearted interest, cooperation, and unity of purpose. That the Bureau of the Census realized the burden this order placed upon the Office and was satisfied with the manner in which it was handled is indicated by its letter of January 14, 1938, addressed to the Public Printer by Mr. W. L. Austin, Director, Bureau of the Census, Department of Commerce, as follows:

The Bureau of the Census is very appreciative of the work done by the Government Printing Office in the printing of the schedules for the Census of Manufactures, 1937, and the electrical industries for the same year.

In the manufactures group, there were 145 schedules, 143 special or industry, a general schedule, and an administrative schedule, which made a total of 958 pages, for which 1,416,500 copies were ordered. This work was done by the Printing Office in 37 working days.

There were 8 schedules in the electrical industries group covering 38 pages, with 329,000 copies ordered, for which an earlier delivery was asked and received.

I am informed by Mr. Zepp, Chief of the Printing Division, that credit is due Mr. W. A. Mitchell, Superintendent of the Planning Division; Maj. L. C. Vogt, Assistant Superintendent of that Division; Mr. Halluin and Mr. Giffin, of the Job Section; and the many employees who had a part in this work.

We have never had more excellent printing done nor received more expeditious delivery, and I desire to express the sincere thanks of the officials of the Bureau who are vitally interested in this work, as well as myself.

SERVICE TO DEPARTMENTS

As a further evidence of the type of service rendered by the Government Printing Office to the departments in its efforts to assist them in

carrying out the functions imposed upon them by law, many letters have been received thanking the Office for its assistance and cooperation. Brief reference will be made to a few of these.

Many Congressmen have expressed their appreciation for the service rendered to their offices in connection not only with the Congressional Record but also with other types of congressional printing. The following letter from Hon. A. Willis Robertson is an example:

I will never cease to marvel at the efficiency of a printing office that can take the proceedings of the Congress, covering some 250 printed pages, at midnight and have the published volume on our desks by 8:30 the next morning, letter perfect in every detail.

So, my hat is off to you and your fine staff, and in leaving the city for what I think is a well-earned rest, may I express the hope that you likewise will find an opportunity for a period of rest and refreshment before you again start grinding out the daily volumes of the Congressional Record.

I have referred in previous reports to the appointment of a Director of Typography and the reorganization of the Layout Section of the Planning Division for the purpose of modernizing and improving the appearance of Government publications with the intent to create a greater demand therefor by the public. The following letters are typical of the large number received commending the Office upon the greatly improved appearance of many of its publications.

From Mr. E. B. Reid, Director, Information and Extension, Farm Credit Administration, under date of July 26, 1937:

We have recently received copies of our publication entitled "ABC's of Credit for the Farm Family." We are highly pleased with the excellent quality of the printing throughout. The especially high quality of the engravings adds considerably to its attractiveness and effectiveness.

It seems to me the past 2 or 3 years have shown a continual improvement in the quality of printing in Government publications. I am certain many Government departments appreciate the progress that has been made and I assure you the Farm Credit Administration is particularly pleased because we feel that under present-day conditions good printing is an extremely important aid in teaching farmers the proper use of credit and informing the public of the services offered by the Farm Credit Administration.

From Mr. A. B. Cammerer, Director, National Park Service, Department of the Interior, under date of March 28, 1938:

As I have written you in the past, the Service greatly appreciates the wholehearted cooperation of the members of your Planning Division and the interest they have shown in making our park circulars of general information attractive. Concrete examples of the appreciation of the public also in this fine work are given in the two attached letters recently received. I am sure you will be as pleased as I was to read them.

The letters referred to by Mr. Cammerer are:

OHIO UNIVERSITY,
Athens, Ohio, March 11, 1938.

The DIRECTOR,
National Park Service,
Washington, D. C.

Attention: Miss Isabelle F. Story.

DEAR MISS STORY: One by one your packages containing circulars, leaflets, and studies have arrived. I am very grateful to you for having sent them, for they will be useful to us.

The new edition of your circulars is remarkably beautiful in make-up. The summary of outstanding features for each park is again excellent. You have my complete admiration for such a superb piece of editing and of bookmaking art.

Yours very sincerely,

(Signed) HENRY J. JEDDELOH,
Associate Professor of Sociology.

THE MCCARTY CO.,
1206 Maple Avenue, Los Angeles, Calif., March 10, 1938.

Mr. ARNO B. CAMMERER,
Director, National Park Service,
United States Department of the Interior, Washington, D. C.

DEAR MR. CAMMERER: May I offer my congratulations on the excellence of the booklet you have just prepared on Death Valley National Monument.

This booklet, unlike many Government works, is elegantly developed, has excellent typography, and the photographs are of the finest, particularly the cover.

In fact, the cover is of such exceptional quality that I am curious to know what photographer took it, as I should like to purchase a print. Can you enlighten me?

Very truly yours,

(Signed) T. T. MCCARTY,
President, The McCarty Company.

One of the first considerations in the Government Printing Office is, of course, service. That this is appreciated by the departments and is essential to their proper functioning is a source of satisfaction to the Office and is often brought to its attention by letters along the line of that received under date of August 3, 1937, from Mr. F. G. Tryon in charge of the Market Statistics Unit of the National Bituminous Coal Commission:

I should like to express my very real thanks for the help given by the Government Printing Office in tiding this unit over an emergency by printing, overnight, a supply of statistical forms which were urgently needed. The forms had been approved by the Commission 10 days ago, but I found on inquiring into the matter that the requisition had been delayed in transit.

I called at the office of Mr. Teague, the Night Planning Manager, at 6 o'clock Friday night and told him that the forms had to be in the mails the following day.

He immediately took the problem in hand, and put me in touch successively with Mr. Scully of the Night Job Room and Mr. Huse, the Night Production Manager. Thanks to these gentlemen and their assistants, the forms were ready on the loading platform at 8 o'clock the following morning.

The organization of the work of any new agency doubtless places exceptional demands upon your Office, and it is reassuring to know that they can be so promptly and courteously met.

Many letters similar to the above were received from the departments during the fiscal year. The following represent merely a cross section.

From Mr. L. A. Moyer, Chief Examiner, Civil Service Commission, under date of September 2, 1937:

The Commission wishes to express its appreciation of the cooperation received from the Government Printing Office in recent months. Certain of our scientific and technical examinations which have required special attention, have been handled with most satisfactory speed and accuracy. The Commission wishes to record officially its appreciation of this service.

From Mr. A. W. Hall, Director, Bureau of Engraving and Printing, under date of September 13, 1937:

Through the splendid cooperation received from you and the members of your staff in producing electrotype plates, this Bureau was enabled to complete, at the close of work September 10, the order for the September 15 Treasury notes which was received on September 6.

I want to take this opportunity to express my thanks and appreciation to you and your staff for meeting the demands of this Bureau expeditiously, not only in this instance but in the many similar cases in the past.

From Mr. B. R. Sherwood, Chief, Division of Publications and Supplies, Department of Labor, under date of June 4, 1938:

The Commissioner of the Bureau of Labor Statistics, Dr. Lubin, has requested this office to express to you and the personnel employed his appreciation of the splendid services which the Government Printing Office has rendered in connection with the publication of Serial R. 752.

In view of the fact that this reprint was required for distribution May 21, 1938, and considering the number of corrections which were not made until Wednesday noon, May 18, 1938, the reprint was delivered on time.

The rapidity with which the work was accomplished and delivered to this Department is sincerely appreciated.

From G. T. Helvering, Commissioner, Internal Revenue, under date of March 21, 1938:

The Bureau of Internal Revenue wishes to express its appreciation for the splendid cooperation extended by the Government Printing Office in printing tax-return forms for the filing period which ended on March 15, 1938.

The personnel of the Internal Revenue Service operates under tremendous strain from the time return forms are released for public distribution until the final date of the filing period, and the performance of its duties therefore necessi-

tates the utmost cooperation from all concerned. The Government Printing Office supplied the Bureau's orders for forms with such dispatch that sufficient material was on hand at all times to meet the demands of taxpayers for tax-filing purposes and to insure the expeditious collection of the revenue.

From Mr. J. P. Davis, Executive Secretary, Prison Industries Reorganization Administration, under date of March 25, 1938:

I should like to express to you our appreciation for the prompt and capable manner in which the Government Printing Office handled our recent report on "The Prison Problem in the District of Columbia" (Jacket No. 44482). Mr. Mitchell, members of the Planning Division, and the staff members responsible for composition and color work all put forth great effort to give us a satisfactory job, in a limited time, and as a result we feel that the report is one in which from the printing standpoint both you and we may take pride.

From Mr. R. B. Williams, Acting Commissioner, Bureau of Reclamation, Department of the Interior, under date of April 16, 1938:

We have just received the first shipment of our new book, Dams and Control Works. I want to express to you and through you to Mr. Mortimer and the members of his staff our gratitude for the assistance in the preparation of this publication, which we consider the finest we have issued.

From the Honorable Claude A. Swanson, Secretary of the Navy, under date of September 25, 1937:

The Government Printing Office was recently engaged, with the Navy Department, in the preparation of the new General Signal Book, a task of considerable magnitude and one demanding care and attention beyond the ordinary.

Throughout the preparation of the book the courteous efficiency and cooperation of the Government Printing Office as a whole were manifest. Naval personnel had contact with certain individuals, including Mr. J. A. Dodge, Mr. W. E. Byram, Mr. R. E. Banks, Mr. R. H. Lecraw, and Mr. J. H. McWhorter, whose services and advice were particularly valuable. Although it is not desired that such action detract from the commendation due every person who had a part in the work, it is hoped that the gentlemen named will be given especial notice of the Navy Department's appreciation.

You will probably be gratified to know that reports from the forces afloat indicate entire satisfaction with the new book, especially as regards its appearance and physical make-up.

From Mr. Stewart McDonald, Administrator, Federal Housing Administration, under date of November 11, 1937:

I want to express my appreciation for the very cooperative and efficient way in which your Department has helped us in getting out our new booklet, Rental Housing as Investment.

It is never pleasant to work in a rush and we hesitated about asking that your men be put under an unusual strain. However, I feel that you will be glad to know they worked willingly and quickly and have turned out a beautiful job for us.

From Mr. E. F. Bartelt, Commissioner of Accounts and Deposits, Treasury Department, under date of January 26, 1938:

As you know, each year it is necessary for the President to transmit to the Congress before the tenth day of January, a report showing the status of funds appropriated by the Congress in the Emergency Relief Appropriation Acts.

Last year the Government Printing Office handled the reproduction of the President's report and again this year we called upon your organization to take care of the work. As you can well realize, the compilation of an exhaustive financial report of this character based upon figures reflected on our state office books as of December 31 requires considerable work, leaving little time for printing or reproducing. This year we were able to furnish a small part of the copy to your office on January 4, while on January 5 and 6 the major portion was delivered to you. On the morning of January 8, a limited quantity of bound copies were available.

This performance is outstanding and we are very appreciative for the speed and attention given to the work by Mr. Mitchell, Mr. Connors, and others in the Government Printing Office for their wholehearted cooperation, and for the high quality of the finished product.

I have referred elsewhere in this report to the adoption of a new cost system and the changing in the scale of prices made as a result thereof. The departments were advised of this change by my letter of October 15, 1937. The following letters are typical of the responses received.

From the Honorable Cordell Hull, Secretary of State, under date of October 27, 1937:

Reference is made to your letter dated October 15, 1937, in which you state that, after a thorough survey of costs and methods of production at the Government Printing Office, you are putting into effect as of October 15, 1937, a new scale of prices designed along commercial lines and in accordance with well-established commercial practice.

With respect to your statement that the change in prices will result in some cases in higher charges and in others in lower charges, I agree that, as the change in question will mean "charging each particular department for the type and class of work it orders," it is the best policy to follow. I note your comment to the effect that under the new scale the charges for "changes made after the jobs are in type (author's alterations)" will be higher than heretofore. I assure you that the Department will make every effort to reduce the extent and number of "author's alterations" and also to cooperate with you in effecting economies on other types of work which tend to increase printing costs, such as requisitions for unusual sizes that involve much waste in trimming, requests for a better grade of stock than is required by the nature of the job, requests for rush work, et cetera.

Permit me to congratulate you on the steps you have taken to place the Government Printing Office on a more businesslike basis. The Department's relations with your office have been very cordial, and it is a pleasure to cooperate with you on the solution of our mutual problems.

From Mr. Wm. H. McReynolds, Administrative Assistant to the Secretary, Treasury Department, under date of October 23, 1937:

Receipt is acknowledged of your letter of October 15 regarding the installation of the new cost-accounting system for printing and binding in the Government Printing Office, and your explanation of the effect it may have upon the Department's printing appropriation if proper consideration is not given in requisitioning its printing needs.

In this connection, you are informed that it is the policy of the Treasury Department to maintain a close supervision over its printing expenditures, care being given especially that quality of paper, sizes of forms, and number of copies ordered to meet its indispensable needs with the lowest possible expenditure of funds. It is pleasing to note, therefore, that your adoption of a new system of computing costs will result in advantage to the Department, as approximately 80 percent of its printing consists of forms which are ordered in quantities sufficiently large to carry the lower rates which you indicate will prevail hereafter.

The Treasury tenders its appreciation to you and your staff for the splendid cooperation given in the past and accepts your proffer of a continuance thereof.

CREATION OF THE OFFICE OF ADMINISTRATIVE ASSISTANT TO THE PUBLIC PRINTER

On June 1, 1938, there was established in the Government Printing Office the office of Administrative Assistant to the Public Printer. This was established by order dated May 27, reading as follows:

There is hereby created in the Government Printing Office, effective as of June 1, 1938, the office of Administrative Assistant to the Public Printer. The official appointed to this office shall be known as the Administrative Assistant to the Public Printer and shall be responsible to the Public Printer for the proper handling of the administrative functions of the Office. In addition to the functions herein outlined the Administrative Assistant will perform such additional duties as may be assigned to him by the Public Printer. The Chief Clerk, the Director of Purchases, the Comptroller, the Mechanical Superintendent, the Superintendent of Documents, the Technical Director, the Medical and Sanitary Director, the Disbursing Clerk, and such other officers as may be designated from time to time shall be under the general supervision of the Administrative Assistant. These officials shall report to the Public Printer through the Administrative Assistant.

For accounting and pay-roll purposes the Administrative Assistant and such other employees as may be attached to his office will be carried as a part of the Office of the Public Printer.

In the absence of the Administrative Assistant his duties will be performed by the Comptroller as Acting Administrative Assistant.

In advising the officials of the Government Printing Office as to the reasons necessitating the creation of the new office and the duties of the Administrative Assistant and the manner in which his office would function, I outlined among other things that—

The future and efficiency of the Government Printing Office depended in a large measure upon the manner in which it met many of the problems it was then facing. These problems had, for the last 2 or 3 years, been growing in number and in seriousness and impor-

tance and had been taking more and more of my personal attention. As the time necessarily devoted to these larger problems increased, the time remaining for conferences with the various executives on problems not so important or serious naturally decreased.

I had realized for some time the unsatisfactory conditions arising as a result of the fact that I could not find time to discuss with the executives many of the problems that faced them. When I stated above that my time was so taken up with major problems that I did not have time to discuss less important questions with the executives, I did not mean that the questions they had to bring to me were not important. I realized that they were and that the executives' problems had to be taken care of promptly, but it was impossible for me to get to them. Then again each executive thought that the problem he had to bring to me was more important than the problems of any of the other executives, and as I couldn't possibly hear them all, I was always afraid that I was leaving undone something of vital importance. This was most unsatisfactory to me, and I realized that it was most unsatisfactory to the executives who wanted to discuss their problems with someone in authority.

So in order to relieve this situation, I therefore divided the management of the Office into two groups: namely, the administrative group and the productive group; and I created a new position: namely, that of Administrative Assistant to the Public Printer. The Administrative Assistant was given charge of the business management of the Office, and the heads of all administrative divisions and groups were directed to report to him. Under this arrangement two executives, in addition to the Assistant to the Public Printer and the Liaison Officer, report directly to the Public Printer: namely, the Deputy Public Printer, who will be responsible for production, and the Administrative Assistant, who will be responsible for all other matters.

The duties of these two executives in their respective fields are readily apparent; however, in order that there would be no misunderstanding, I stated briefly that I wanted all action on personnel questions, such as the hiring, disciplining, promoting, demoting, and dismissing of employees, to be handled under the direction of the Administrative Assistant; as well as all questions involving purchase work, legal work, accounting work, or any of the duties then falling upon any of the units enumerated. On the other hand the Deputy Public Printer is responsible to me for the proper solution of all manufacturing problems, and it is his duty to see that each operation is performed as economically as possible, that we have the right equipment, that the equipment is properly used, that the producing

units are neither overmanned nor undermanned, and that from the manufacturing standpoint the plant is running as smoothly as it is possible to have it run. It is his duty to work out all production problems through the Production Manager, the superintendents, and the foremen involved in each case and to submit to me for approval or disapproval any changes which, in his opinion, are of sufficient importance to necessitate the approval of the Public Printer. It is his duty to consider the problems and questions raised by the production supervisory force and brought to his attention through the proper channels and to pass on to me those problems and questions which, in his opinion, should be brought to my attention.

I felt that the change would, in addition to relieving the Public Printer of much of the detail that should and must necessarily be handled by other responsible executives, be of great benefit to the Office in that the executives who now have ideas and suggestions as to improvements in procedures, etc., would be able to take them up with either the Deputy Public Printer or the Administrative Assistant, as the case may be, who would in turn bring them to me for final action.

PERSONNEL

There was a decrease of 185 in the number of employees on the rolls of the Office at the close of June 30, 1938. The total number on this date was 5,409, as compared with 5,594 on June 30, 1937.

During the year 91 employees of the Office were retired—54 on account of age, 21 on account of disability, and 16 who took advantage of the clause in section 1 of the Retirement Act, approved May 29, 1930, which permits of retirement at employee's option for those who are eligible for retirement at the age of 70 years, 65 years, or 62 years, as the case may be, after they have attained the age of 68, 63, or 60 years, respectively, providing they have had at least 30 years of service. Of the 91 employees who retired during the past year, 71 were men and 20 were women.

The total retirements from August 20, 1920, to June 30, 1938, for age, disability, and optional, number 1,738.

The following summarized statement shows all changes in personnel during the past fiscal year:

Appointments	350
Separations	535
Retirements	91
Deaths	36
On rolls June 30, 1938	5,409

It may be interesting to note that during the past year there were 7,176 visitors conducted through the Office; of this number 94 were from foreign countries.

PURCHASING DIVISION

During the fiscal year ended June 30, 1938, the Purchasing Division placed 8,040 orders, involving total expenditures for purchases of approximately $6,350,000, paper purchases alone amounting to $5,050,000. Open-market proposals for material and paper numbered 18,000 and for illustrations 401.

By closely watching the paper market and the trends therein and by placing orders for standard stocks at the most opportune time as indicated by such trends, an actual saving of $17,975.99 was effected during the year.

The Purchasing Division was able to secure by transfer from other departments to this Office during the fiscal year 1938 surplus property valued at $1,405.

Proposals for material were sent in April 1938 for the term of 1 year beginning July 1, 1938, and ending June 30, 1939, to approximately 625 prospective bidders, which resulted in the placing of 60 contracts. Proposals for paper were sent in October 1937 to approximately 150 firms for the 6-month term beginning January 1, 1938, and in April 1938 for the 6-month term beginning July 1, 1938, which resulted in the placing of 23 contracts for the first 6-month period and 20 contracts for the second 6-month period. Proposals for envelopes for the year beginning July 1, 1938, were issued in April to approximately 50 prospective bidders, resulting in the placing of 7 contracts.

As a result of the reorganization involved in the creation of the office of the Administrative Assistant, the purchase procedure was modified slightly by increasing the responsibilities formerly carried by the Director of Purchases. These changes are outlined in the following order:

Until further notice the Director of Purchases will finally approve for the Public Printer—

1. All purchase requests for stock items covered by contracts previously approved.
2. All purchase requests for stock items that are to be bought in the open market.
3. All purchase requests for emergency purchases of material, supplies, equipment, and parts for machines.
4. All purchase requests for paper, material, and supplies that are requisitioned for a specific jacket and that are to be used in connection therewith and charged directly thereto.

5. The awards on all purchases of stock items purchased in the open market, and the awards in connection with all purchase requests approved by the Public Printer or the Administrative Assistant to the Public Printer where such awards are made to the low bidder.

6. The awards in those cases where the purchase does not exceed $100 and is to be made to other than the low bidder or to a tie bidder, as well as the low bidder.

In connection with the purchase request for stock items, the Director of Purchases is charged with the responsibility of determining that the item requested has been previously approved by the Public Printer as a stock item, or that the Public Printer has ordered that the class of stock requested should be continuously carried on hand. He is further charged with the responsibility of determining that the proposed purchase of a stock item does not exceed the amount of the particular item to be carried in stock or does not exceed the actual requirements of the Office.

In connection with purchase requests and awards to supply emergency needs, the Director of Purchases will hold these to the absolute minimum, and will call to the attention of the Administrative Assistant any emergency request for any unusual item or any item that, in his opinion, the emergency request indicates a lack of foresight or proper planning on the part of the official or officials making the request. The Administrative Assistant will in turn call these unusual emergency requests to the attention of the Public Printer or the Deputy Public Printer, as the case might be.

In order that the proper officials may be advised as to the orders and the amounts thereof being placed under this procedure, the Director of Purchases will route the Daily List of Orders Placed through the office of the Administrative Assistant to the Comptroller.

New Equipment

New equipment purchased during the past fiscal year for the various divisions was as follows:

Composing Division.—Twenty bases with hooks, etc.; 16 galley cabinets; 4 make-up banks; 37 miscellaneous cabinets; 42,300 galleys; 12 Intertype slug-casting machines with quadding and centering devices, electric melting pots, and extra matrices; one 5-point, one 6-point, ten 9-point, and four 12-point monotype composition molds; one 1-point and one 2-point Ludlow typograph molds; 12 motors for increasing speed of Intertype machines; 4 new-type 3,000-watt monotype casting pots; 5 Vandercook proof presses; 1,500 dozen pairs quoins; 12 chase racks; 2 steel dumping tables; and 6 imposing tables.

Platemaking Division.—Two stereotype casting boxes for Record plates; 1 stripfilm roll camera with screens and lamps; 1 Form-O-Scorch drying machine; 1 vacuum printing frame; 1 negative squaring device; 1 jig saw and drilling machine; 1 ball-bearing trimmer; 1 automatic whirler for drying plates up to 22 by 22 inches.

Presswork Division.—Ten ink agitators for Miehle presses; 1 Presto drier for embossing; 2 suction pile feeders 41½ by 55½ inches and two

46 by 61½ inches; 1 gluing machine; 2 nonoffset guns; 8 perforators for Miehle presses; 2 one-color LSS Harris offset presses to print sheets approximately 35 by 46 inches; 1 Hoe web press (with bander) for printing postal cards; 1 box stitching machine.

Bindery Division.—One Special 2A Smyth automatic case-making machine with universal picker and platform automatic feeder attachment; three 64-inch automatically spacing paper-cutting machines; 36 package-sealing machines; 2 model K Cleveland folding machines with continuous feeders; 1 board shear; 1 continuous automatic-feed book trimmer for books up to 6 inches thick.

Stores Division.—One 2,000-pound electric lift truck; ten 4,000-pound electric lift trucks; three 5,000-pound hand lift trucks.

Delivery Section.—Five 4-ton General Motors trucks; 2 half-ton Chevrolet trucks, 1 half-ton Ford truck; 1 Ford sedan for Hospital use.

Maintenance Division.—Two exhaust fans; 1 gas hot-water heater and storage tank.

HEALTH AND WELFARE ACTIVITIES

Emergency Hospital

During the fiscal year 1938 the Emergency Hospital gave a total of 20,847 treatments to employees of the Office. Of this number 3,828 were for injuries received while on duty; 2,029 surgical treatments for other than injuries received while on duty, which enabled the employees to remain at work and perform efficient service with little or no loss of time; 9,872 treatments for medical conditions; and 5,218 re-treatments.

In addition to the surgical and medical treatments rendered to employees of the Office by the Emergency Hospital staff, 374 physical examinations were made of new employees on entering the service and 888 physical examinations were made in determining the employees' physical fitness for certain occupations and in checking the relationship between occupation and physical condition.

A visiting nurse was appointed on November 16, 1937, to investigate causes of sickness and to lend such assistance as possible to the ill employee. Since that date 1,665 visits have been made to employees who had reported sick. During the fiscal year 31,498 days of sick leave were granted.

There were 3,828 employees injured while on duty. This includes all injuries, major and minor, with and without lost time. There were 121 lost-time accidents, resulting in a loss of 1,033 working days.

Group Life Insurance

Through the Government Printing Office Group Life Insurance Association, organized May 1, 1931, there have been paid, up to April 30, 1938, 208 death and 7 disability claims, totaling $188,832. At the close of the association's fiscal year on April 30, 1938, there were in force 3,524 first units of insurance, amounting to $3,059,748; 1,841 second units, amounting to $1,599,678; and 364 third units, amounting to $300,001, total insurance in force being $4,959,427.

On April 30, 1938, the reserve fund of the association consisted of $57,000 in United States Treasury bonds and $2,000 invested in the Government Printing Office Federal Credit Union. This fund was established and will be used should the present premium rates (which are adjusted annually) to the association be materially increased due to the group attaining a high average age or having a high mortality experience.

Insurance is provided at a cost of $1 per month per unit in amounts from $250 to $1,000, depending upon an employee's age.

Group Hospitalization

Group hospitalization was introduced into the Government Printing Office on May 1, 1935, at which time 515 employees joined the organization. At the close of the fiscal year 1938 there were 1,341 members of this group.

For the nominal cost of 65 cents a month members are assured 21 days' hospital care, including semiprivate accommodations, bed and board, general nursing care, use of operating room, ordinary medications, and routine laboratory examinations. If more than 21 days' hospitalization is needed, the hospital allows a discount of 10 percent to members.

A number of leading hospitals in the city are affiliated with this organization, and each member of the group may select the hospital to which he would prefer to be taken. All hospitals affiliated with group hospitalization have been approved by the Medical Society of the District of Columbia.

Participation is open to all employees of the Government Printing Office under 65 years of age who have been in sound health for 30 days preceding the date of application for membership.

Federal Credit Union

The Government Printing Office Federal Credit Union was granted its charter on August 20, 1935, under authority of the act approved June 26, 1934 (Public, No. 467, 73d Cong.). The purpose of the Fed-

eral Credit Union system is to establish a further market for securities of the United States and to make more available to people of small means credit for provident purposes through a national system of cooperative credit, thereby helping to stabilize the credit structure of the United States.

At the end of the fiscal year 1938 the union had received, for shares, fines, and entrance fees, a total of $103,399.44. Its outstanding loans amounted to $104,772.65. Its total membership was 2,259. All loans are payable either in monthly or semimonthly installments, the interest charge under the Federal Credit Union Act being 1 percent per month on unpaid balances.

Under the provisions of the Federal Credit Union Act, all receipts from entrance fees and fines must be transferred to a reserve fund for bad loans and 20 percent of all earnings to a surplus fund. At the present time the surplus fund amounts to $1,766.90 and the reserve for bad loans, $1,594.61.

The net earnings of the association since January 1, 1938, amount to $3,160.03, which will be divided among the members in proportion to the length of time and the amount of their deposit.

Government Printing Office American Legion Post, No. 33

The Government Printing Office American Legion Post has a membership of 410 and is one of the largest posts in the Department of the District of Columbia. The Post has been quite active this past year in Americanization, welfare, and rehabilitation work and has taken part in many civic and patriotic affairs of the District.

United Veterans of American Wars, Government Printing Office Unit No. 1

The United Veterans of American Wars, Government Printing Office Unit No. 1, was organized in 1922, and it is the oldest veteran organization in the Government Printing Office. Its membership numbers 375 and is composed of Spanish-American and World War veterans. Unit No. 1's purpose is to aid and assist its members in time of illness and distress. Unit No. 2, known as the Col. Charles Young Unit, is the colored branch of this organization. During the past year both units participated in many patriotic and social events.

The Cafeteria and Recreation Association

The Cafeteria and Recreation Association of the Government Printing Office is an employee organization which operates the cafeteria, bowling alleys, cigar stand, auditorium, and recreation rooms. Dur-

ing the fiscal year 1938 the cafeteria served 1,054,821 good, wholesome meals to the employees of the Office that could not have been duplicated in either quality or price in the neighborhood.

The Cafeteria and Recreation Association during the past year rendered assistance to the Government Printing Office baseball clubs, to the orchestra, to the band, and to other employee organizations.

APPRENTICE SCHOOL

At the close of the fiscal year the Apprentice School had an enrollment of 93 boys and 4 girls. Of this number 62 are assigned to the Composing Division, 15 to the Press Division, 14 to the Bindery, 4 to the Platemaking Division, and 2 to the Machine Section.

Reports from the various instructors, foremen, and group chiefs indicate that the apprentices are doing very well in both their academic and trade training courses. The average for the class for the fiscal year 1938 was between 87 and 88 percent.

In October 1937 four new subjects were introduced in the academic course: a history of printing, a study of the Government Printing Office Style Manual, typography, and mechanical drawing. In their shop training courses the apprentices are being given more advanced assignments whenever possible and in many cases are performing journeymen's duties.

WAREHOUSE BUILDING NO. 4

In my annual report for the last fiscal year a brief reference was made to the new Government Printing Office warehouse, which was then under construction. Bids for this building were opened at 1 p. m. on August 31, 1936. The low bidder for the construction of the building was the Charles H. Tompkins Co., and the low bidder on the elevators for the building was the Montgomery Elevator Co., of Moline, Ill. These bidders were notified to proceed with the work on October 28, 1936. Demolition was started on the site on October 12, 1936, and the excavating work was started November 9, 1936.

The warehouse was completed and turned over to the Public Printer on February 4, 1938. It is a three-story and basement building of reinforced concrete, 467 feet long by 87 feet 6 inches wide. The load capacity of all floors is 500 pounds per square foot. There is a total net floor area of 129,139 square feet, of which approximately 100,000 square feet are being used for storage purposes. The cost of the building and the site was $1,394,770, the building costing $1,210,403 and the site $184,367. Approximately 700 carloads of

paper of 40,000 pounds each, making a total of 28,000,000 pounds, can be stored in the warehouse at one time.

The third floor of the building is on a level with the railroad tracks running into Union Station. On this floor there are two tracks, on which may be placed a total of 16 freight cars at one time. To bring the tracks into the building it was necessary to obtain special legislation in order that they could cross over First Street NE., between G and H Streets, as the original act providing for a Union Railroad Station in the District of Columbia stated that no freight trains should be run into the city south of Florida Avenue except in cases of temporary emergency. The act (Public, No. 739, 74th Cong.) authorizing the crossing of First Street and the running of freight cars south of Florida Avenue provided in part "That the Terminal Co. is authorized, on terms and conditions to be agreed upon by said company and the Public Printer, to permit the transportation of freight and express cars to and from sidings which may be constructed by the United States at its cost for the exclusive use of the Government Printing Office." It further provided "That, subject to the approval of the Commissioners of the District of Columbia, there may be constructed an overpass for railroad tracks for the warehouse of the Government Printing Office above First Street NE., between G and H Streets."

In addition to the two railroad tracks on the third floor of the building there is also on this floor air-conditioning equipment for controlling humidity and temperature in the Postal Card and Money Order Section of the Presswork Division, which is located on the second floor. The third floor also provides considerable storage space, and from it operates an automatic roll lowerator which is used to carry rolls of postal-card stock, each roll weighing approximately 1,000 pounds, from the unloading platform to the postal-card storage space adjacent to the postal-card press unit. Rolls of postal-card stock are rolled from the freight cars onto a receiving platform at floor level. From this point the rolls automatically roll onto the lowerator, the door of which automatically closes. The lowerator then drops to the second floor, where its door is automatically opened, the roll again leaving the lowerator automatically and the lowerator returning to the third floor for its next load. Each round trip of the lowerator requires approximately 1 minute of time, thus allowing the unloading of a 40,000-pound load of postal-card stock and delivering it to storage on the second floor within 45 minutes.

Ordinarily locomotives do not enter the building. However, provision for exhausting the smoke made by the locomotives that do

enter is provided through a series of propeller fans in the roof. These fans are controlled by a time switch which automatically cuts them off after a specified period of operation.

The Postal Card and Money Order Section workrooms on the second floor are acoustically treated for noise reduction, have yellow pine end-grain wood-block flooring, double glazed windows with heat-absorbing glass outside, and insulated walls.

The postal-card unit is equipped with three rotary card presses, a fourth press is being installed, and space has been left for the installation of another press for this work. These presses print postal cards from case-hardened steel plates 80-up on rolls of bristolboard of a standard thickness, 33 inches wide. After receiving the print impression the stock is run through a set of rotary knives or slitters on the same press, which cut it into 10 ribbons, each of which is 3¼ inches wide. These ribbons of printed postal cards travel forward to a set of five chopping knives which cut them into finished cards 5½ inches long. When 50 strokes have been made by the knives, the packs of cards are lowered upon conveyors which pass them automatically through banders and deliver them in 5 packs of 50 cards each. This entire operation, from the printing to the banding of the cards, is done on each press. The cards are then placed by hand in cardboard cartons, after which they are packed 2,000, 5,000, and 10,000 in heavy containers. Post Office regulations require shipment to be made in lots of 7,500,000 to the different Post Office agencies throughout the country. Each postal-card press prints, cuts, and bands cards at the rate of 6,400 a minute, the average 8-hour daily output of the 3 presses being 6,000,000 cards.

The Money Order Section has combination mercury-vapor and incandescent lamps to approximate daylight for the careful inspection work which is necessary. One 250-watt high intensity mercury-vapor and three 100-watt incandescent lamps are contained in each fixture and enclosed in a glassteel diffuser.

In the money-order unit there are four presses—three new ones that were specially built for the printing of domestic money orders and an old one that is used for the printing of international money orders. The three new presses print both sides of the sheet simultaneously from a roll 22 inches wide, 16 at an impression. Each press is capable of producing 10,000 impressions an hour. Each money order carries 4 serial numbers, and each press carries 64 numbering heads. The postal money-order seal is printed on the face of each domestic money order in blue ink, the face and back of the order and the serial number being printed in black. Each sheet is slit into 2 on the press and

delivered in sheets 8-up, 100 sheets to a "kick." After examinations for defects or irregularities, especially in the serial numbers, the orders are passed on in packs of 200 sheets to a stitching machine. After stitching they go to a stripping machine, which glues a strip of vellum on the back. They are then cut apart on a modern guillotine cutter, sorted, placed in mail bags, and sent by registered mail to their respective destinations. The old money-order press is used for the printing of international money orders. These are all printed in black, six orders at a time.

In addition to the postal-card and money-order presses there are on the second floor two paper cutters, two container stitching machines, two money-order stitching machines, a stripping machine, and a line composing machine. The paper cutters are used for the trimming of money-order books and for the cutting up of waste money-order and postal-card stock; the stitching and the stripping machines for stitching and the gluing of a vellum strip on the back of each money-order book; and the line composing machine for setting the name of each post office and the serial number of the office. The carton machines are used for the making of cartons in which to ship postal cards.

The pressrooms and the space used for unprinted postal-card stock are air-conditioned. The winter air-conditioning is 76° F. and 50 percent relative humidity. In summer relative humidity is controlled by humidifying or dehumidifying, as conditions may necessitate.

From the postal-card storage vault postal-card cartons are placed on a belt conveyor that carries them up to the third floor and delivers them in mail or freight cars as required for shipment. The time required for the loading of a car varies from 1 to 2 hours, depending on the proportion of small and large cartons making up the shipment, the large cartons requiring less time than the small ones. In addition to the Postal Card and Money Order Section and the storage vaults, there is located on the second floor the temporary offices of the Superintendent of Stores and Traffic Manager.

The first floor is devoted entirely to storage, with the exception of necessary space for a truck shipping and receiving platform and a waste-paper bin, into which is carried by a vacuum system the waste trim from the postal-card presses.

The basement floor is used principally for storage, but it also contains power transformers and switchboard rooms, battery-charging equipment, and other necessary building equipment, including the automatic sprinkler apparatus, hot-water heater, and general heating control apparatus for the building.

The warehouse is equipped with four freight elevators, each 7,500

pounds capacity, serving all floors from the basement to the third floor, and with two larger elevators, each of 15,000 pounds capacity, which serve all floors and the underground tunnel which passes under North Capitol Street and will connect the warehouse with the new building now being built on the corner of North Capitol and H Streets, NW. The floor of the tunnel is approximately 30 feet below street level, it being necessary to pass under a large storm sewer in North Capitol Street. The tunnel has two lanes, thus allowing electric trucks, tractors, and trailers to operate as frequently as necessary in both directions at once without interference.

Paper shipped on skids is unloaded from freight cars by means of electric lift trucks which enter the cars, pick up the skids, and carry them away to storage. The same method is used in unloading paper shipments arriving by motor truck. A receiving platform, level with the body height of motor trucks, makes this method convenient. Paper received in rolls is either rolled out of the freight cars or trucks or is picked up and carried by means of electric lift fork trucks. Platform scales for weighing shipments are set in the floor and are conveniently located, both on the third floor where freight is received and on the truck receiving platform at the first floor. These scales are of 10,000 pounds capacity and have type registering beams.

Paper on skids is generally piled one on top of the other by means of high-lift electric trucks or by use of the fork trucks. Rolls are stored on the side and piled about four tiers high by means of electric high-lift fork trucks. The postal-card stock is piled in the same way, but a three-motor bridge crane is used for stacking it. Chains from the crane hook are attached to bars which pass through the cores of the rolls, which method makes possible the handling of four rolls at one time. Materials such as the binders' boards are loaded on trailers and hauled with electric tractors to point of storage. Thus it will be seen that the use of stevedore and other hand trucks is entirely eliminated, and all handling and hauling of stock is done with power equipment.

Through these methods greater savings than those estimated by the Public Printer ($368,000 annually) in his arguments before the Appropriations Committee when he was seeking authority for the building are being realized.

ANNEX BUILDING NO. 3

In the last annual report it was pointed out that no award was made for the construction of this building, as the bids received in response to advertisements of May 12, 1937, were in excess of the amount

then authorized by Congress for expenditures in connection with this project; and as Congress failed to increase the authorization or to include an appropriation item in the third deficiency bill for this work, no further action was possible at that time, and the building program was thus delayed another year. Immediately upon the convening of the third session of the Seventy-fifth Congress and after more than 20 years of unsuccessful effort by former Public Printers, the Public Printer, with the cooperation of the Public Buildings Branch of the Procurement Division, succeeded in convincing the Congress of the very dangerous condition of a group of 11 old buildings; and the necessary increase in the then existing authorization and an appropriation were obtained. Because of the many special features involved, detailed information on the building will be of general interest and value to architects, engineers, and the printing industry as a whole. The following details are therefore submitted:

Construction of buildings Nos. 3 and 4 was authorized by the Seventy-fourth Congress in the Second Deficiency Appropriation Act, Fiscal Year 1935, Public Act No. 260, signed by the President August 12, 1935. Congress authorized an expenditure of $5,885,000 "For necessary land and construction of annex buildings for the Government Printing Office, including rights-of-way, furniture, moving expenses, rental of temporary quarters during construction, railroad sidings, alterations to existing buildings, all necessary tunnels connecting proposed and existing buildings, demolition of existing structures, all necessary changes in mechanical equipment." The Seventy-fifth Congress increased the limit of cost from $5,885,000 to $7,700,000 in the Treasury and Post Office Departments appropriation bill, 1939 (H. R. 8947).

Building No. 3 will face North Capitol Street, extending 384 feet west along H Street, and will be 175 feet 2¼ inches wide, extending from H Street to Jackson Alley. Plans and specifications were prepared by the Public Works Branch of the Procurement Division, Treasury Department. All lay-outs for equipment and machinery were made under the supervision of this Office.

Bids were opened at 1 p. m. on May 27, 1938. The low bidder for the construction of the building was McCloskey & Co., of Philadelphia, Pa., with a base bid of $4,291,000. Of 11 alternates, 6 were accepted and 5 rejected. The alternates accepted are as follows:

1. Using asphalt plank in basement in lieu of heavy-duty concrete at an increase in cost of $3,000.

2. Supplying a combined fire-alarm and guard-signaling system at an increase in cost of $2,000.

4. Using ceramic glazed wall units whenever salt-glazed clay wall units are specified at a decrease in cost of $500.

5. Acoustical tile ceilings in certain places at an increase in cost of $65,000.

6. Providing the last two coats of floor finish on wood floors (except end grain and maple individual strips), linoleum, cork tile and cork carpet at an increase in cost of $700.

7. Including the hospital unit complete as shown and specified at an increase in cost of $11,500.

Base Bid	$4, 291, 000
Alternate No. 1	3, 000
Alternate No. 2	2, 000
Alternate No. 5	65, 000
Alternate No. 6	700
Alternate No. 7	11, 500
	4, 373, 200
Alternate No. 4	−500
Total cost of construction	4, 372, 700

The low bidder on elevators for building No. 3 was the Montgomery Elevator Co., of Moline, Ill., at $288,863. The total cost of building and elevators is $4,661,563.

The total net floor area, exclusive of toilets, locker rooms, stairs, and elevators is 481,975 square feet. The total gross area is 564,639 square feet.

To protect the west wall of our building and provide a scrap storage yard, the property adjacent to our proposed building, 25 feet wide by 175 feet 3 inches deep, lot 52 in square 624, was purchased by the Procurement Division for our use.

Contracts for the building were awarded and demolition of the old buildings was started June 27, 1938.

The foundations will be concrete spread footing designed to give a bearing pressure on the soil of 6,000 pounds per square foot for dead load and 7,000 pounds per square foot for live load.

The superstructure is structural steel fireproofed with concrete and reinforced concrete slabs. The bays are 15 feet 10 inches by 34 feet 5 inches, divided into three floor panels consisting of two-way slabs with minimum thickness of 7 inches for the first floor and 6½ inches for the second to seventh floors, inclusive.

Sections of floor slab under the tabulating card presses, monotype casting machines, and the offset camera section are isolated from the structural slab by 1½ inches of cork.

Following is a tabulation of live loads:

	Slab	Beams	Girders	Columns
Entrance lobby and office space, first floor; locker rooms and toilets around elevators, all floors; eighth floor office space	*Pounds per square foot* 125	*Pounds per square foot* 100	*Pounds per square foot* 100	*Pounds per square foot*
First floor storage	500	500	500	
First floor power plant	400	300	[1] 250	
Jackson Alley driveway	500	300		
Storage space and machinery:				
Space second to seventh floors	400	400	300	
Metal storage sixth floor	1,000	1,000	1,000	
Metal melting room sixth floor, and sorts room seventh floor	800	800	800	
Office vaults eighth floor	250	250	200	
Columns:				
From eighth floor				100
From second to seventh floors				[2] 250
From first floor storage				400
From first floor power plant				250
From first floor entrance lobby				100

[1] Equivalent to H 20 loading without impact.
[2] Except special cases.

Structural steel is designed on the basis of the American Institute of Steel Construction Code, except that concrete encased beams, with steel beams 18 inches or under designed for a unit fiber stress of 22,000 pounds per square inch and steel beams over 18 inches on 20,000 pounds per square inch. Structural steel columns to be encased in 4 inches of concrete and computed on the basis of the American Concrete Institute Code. Reinforced concrete is designed in accordance with the American Concrete Institute Code.

The exterior of the building is to be built of salmon-colored brick with stone trim to match building No. 1. All windows will be double hung with steel sash and frames with the exception of certain court windows, which will be steel casement. In air-conditioned spaces windows will be double glazed.

Flooring throughout production parts of the building will consist of 2½ inch end-grain wood-block flooring assembled in strips by means of splines. Basement and part of first floor will have asphalt-block flooring and offices on the eighth floor will have linoleum flooring.

In air-conditioned rooms, walls will be finished with a tile wainscot above which will be "corkcoustic" tile. Walls of workrooms that are not air-conditioned will be brick with painted finish. Acoustical treatment will be provided in presswork, linotype, monotype keyboard, monotype casting, and proofrooms. Ceilings, except where acoustically treated, will be concrete, painted finish.

Lighting generally will be of direct type using glassteel diffusers. Eighth floor offices and proofrooms will have indirect lighting.

Elevators: Two gearless passenger, two geared combination passenger and freight, and seven geared freight elevators will be provided of the following sizes, capacities, etc.:

Elevator No.	Loads in pounds	Speed, feet per minute	Floors	Platform size, over all
32 and 33, passenger	4,000	500	Basement to eighth	8 feet wide by 7 feet deep.
34 and 35, freight	15,000	150	Sub-basement to fifth	10 feet 6 inches wide by 15 feet 8 inches deep.
37 and 38, freight	7,500	300	Basement to seventh	7 feet 6 inches wide by 10 feet 7 inches deep.
39 and 40, freight	7,500	300	Basement to lower penthouse door.	7 feet 6 inches wide by 10 feet 8 inches deep.
41, freight	{ 10,000 / 20,000 }	[1] 200	Basement to eighth	12 feet 6 inches wide by 10 feet 7 inches deep.
42 and 43, combination freight and passenger.	7,500	300	Basement to eighth	7 feet 6 inches wide by 10 feet 7 inches deep.

[1] And reduced speed.

Following is a list of dumbwaiters and form lifts:

Dumbwaiter	Load in pounds	Speed, feet per minute	Floors	Platform size, over all
No. 1	200	200	Second to eighth	2 feet 2 inches wide by 2 feet 7 inches deep.
No. 2	150	100	Fifth to seventh	2 feet 2 inches wide by 2 feet ½ inch deep.
No. 3	150	100	Fifth to sixth	2 feet 2 inches wide by 2 feet ½ inch deep.
No. 4	300	100	Fifth to sixth	2 feet 2 inches wide by 2 feet 5 inches deep.
No. 5	300	150	Third to sixth	2 feet 2 inches wide by 2 feet 5 inches deep.
No. 6	300	100	Fourth to fifth	2 feet 2 inches wide by 2 feet 5 inches deep.
Nos. 7 and 8, form lifts	1,500	100	Fourth to sixth	1 foot 6 inches wide by 3 feet 7 inches deep.

Shafts will be provided for three additional elevators to be installed as required. No. 31 is a future passenger elevator located in the east bank. No. 36 is a future freight located on the Jackson Alley side at east end of building. No. 44 is a future combination passenger and freight elevator located in the west bank.

Air-conditioning will be provided for the Main Press Section (entire fourth floor), Job Press Section (part of third floor), Offset, Tabulating Card, and paper storage (entire second floor), Record pressroom and Patent pressroom (part fifth floor), and Wood-blocking Section (seventh floor). The compressors will be located in the basement of the Power Plant, and the dehumidifiers, fans, pumps, etc., will be located adjacent to the areas conditioned. All air-conditioning

is for industrial purposes. The air-conditioning system is designed to maintain the following conditions:

At times requiring cooling or dehumidifying to maintain in industrial conditioned spaces a dry-bulb temperature not in excess of 80° F. when the outside conditions do not exceed 95° dry bulb and 78° wet bulb and to maintain 55 percent relative humidity at all times regardless of outside temperature up to 78° wet bulb.

At times requiring heating or humidifying to maintain in industrial spaces a minimum dry-bulb temperature of 76° F. and to maintain a relative humidity of not less than 50 percent at all times when the outside temperature is not below 0° F.

Two 330-ton refrigerating units located in the basement of Power Plant will supply the necessary chilled water for dehumidifying. Condenser water will be cooled by means of air washers located in penthouse.

All electrical power is furnished by the Potomac Electric Power Co. through two 13,200-volt, 60-cycle, 3-phase feeders. Current is stepped down to 120–208 volts through six 500-kilovolt-ampere transformers with network protectors to the secondary distribution system. The secondary bus is tied in with the secondary bus in building No. 4. Direct current power, 120 and 240 volts, for presses is supplied through two 1,000 and one 500-kilovolt-ampere converters and transformers. All power for buildings Nos. 1 and 2 will be supplied from the power plant in building No. 3.

Steam for heating and industrial purposes will be furnished from the Capitol Power Plant through building No. 1.

The entire building will be protected with an automatic sprinkler system. A dry-pipe system will be used in all paper-storage areas and a wet-pipe system in all other spaces.

A fire-alarm system for sounding a local alarm or calling the city fire department from any box will also sound a local alarm in the event of a water flow in the sprinkler system. In addition to sounding the alarm in building No. 3 the alarm will be sounded in certain offices in building No. 2. Any box pulled or a water flow in the sprinkler system will be recorded in the guard's office on a printing register simultaneously with the sounding of the coded alarm. All disarranging or tampering in the sprinkler system will be recorded, and when the trouble has been corrected and the system restored to normal the register will so record.

The watchman's reporting system will consist of boxes throughout the building with built-in telephones for communication with the guard office, recall lights and buzzer for contacting guards on the

beat from the desk, provision for sending an emergency or riot call from any box, and a printing register in the guard's office, which will record any box pulled. A hold-up alarm in the disbursing office also records on the printing register.

Electric clocks and work-program bells will be operated on the minute impulse system from a master clock and program machine.

A paging system will be installed to cover the entire building operated from the telephone exchange on the eighth floor.

A conveyor system from the Record pressroom will connect with the conveyor system of building No. 1 and continue to the City Post Office through the tunnel which is now under construction by the Architect of the Capitol.

The Architect of the Capitol is building by contract a new tunnel between building No. 1 and the City Post Office tunnel. This contract also includes the replacing of the present 8-inch steam mains from the Capitol Power Plant with new 14-inch steam mains.

In the increase of limit of cost for our building projects as allowed by the Seventy-fifth Congress in the Treasury and Post Office Departments appropriation bill for 1939 (H. R. 8947), money was made available for rewiring buildings Nos. 1 and 2, and the replacement of elevators in building No. 1.

Space assignments in building No. 3 will be as follows:

Basement.—Approximately two-thirds of the basement area will be available for storage. Part of the space will necessarily be occupied by power-plant equipment. A vault extending under the North Capitol and H Streets sidewalks will be suitable for plate storage. Locker rooms, toilets, and showers are provided for the Stores Division.

First floor.—Approximately two-thirds of the first floor, with a load capacity of 500 pounds per square foot, will be available for storage. The first floor will also contain the power house, entrance lobbies, guard office and their locker rooms. The space originally laid out for display room is intact, but all interior finish is omitted. The Jackson Alley side of the first floor will have a large entrance for bringing large and heavy machinery and equipment into a large freight elevator located near the center of the building.

Second floor.—About one-third of the second floor is allocated for paper storage, or such other future requirements as may develop. At the front of the building is located the office of the Superintendent of Stores and Traffic Manager. The balance of the second floor will be occupied by the Offset and Tabulating Card Section. The tabulating card presses will be placed on a section of floor isolated with cork from the main structure. Entire floor air-conditioned.

Third floor.—Job Composing and Job Press Sections; Job Composing Proofroom and Plate Vault office. A little more than half of this floor is air-conditioned.

Fourth floor.—Main Pressroom and Superintendent's office. Entire floor air-conditioned.

Fifth floor.—Hospital, Woodblocking Room (air-conditioned), office of Superintendent of Platemaking, Finishing Section, Record Pressroom and Patent

Pressroom (both air-conditioned), Patent Composing Room and Patent Proofroom.

Sixth floor.—Electrotype Molding, Electrotype Plating, Stereotyping, Plating Lock-up Section, Hand Section, Linotype Section, and Metal Melting and Metal Storage.

Seventh floor.—Photoengraving, Main Proofroom, Monotype Keyboard, Casting and Correcting, office of Superintendent of Composition.

Eighth floor.—Executive offices, telephone switchboard, and Apprentice Section.

COMPOSING DIVISION

The Composing Division shows an increase in production during the past year in that 2,161,601,000 ems of type were set in comparison to the 2,062,659,800 set during 1937. Of this total, the Monotype Section set 972,193,000 ems in 1938 and 775,275,000 in 1937.

The Plating Lock-up Section sent to the Platemaking Division 163,858 pages—107,563 for stereotyping and 56,295 for electrotyping. The Hand Section imposed for press 65,500 forms.

The Proofroom prepared for the machines 971,386 folios of copy. This does not include congressional work, the Surgeon General's Catalog, the Postal Bulletin, the Railway Mail Bulletin, and the work for the Library of Congress. Galleys read and revised during the year totaled well over a million. The Proofroom also translated 2,077 folios for other departments of the Government.

Recommendations as to Preparation of Copy

The work of the Composing Division is rendered more difficult and expensive by the fact that much of the copy received by it is in extremely poor condition. The departments could greatly assist this Office in eliminating some of these difficulties and in the meantime reduce their printing bills by carefully editing their manuscripts before submitting them to this Office. The cost of authors' changes in type is very high.

It is urged that each Federal agency designate a competent copy preparer, thoroughly familiar with Government Printing Office routine and its Style Manual and good usage in the English language, to contact in a cooperative manner the officials in his department who handle the editing of copy before it is sent to the Government Printing Office for publication. This copy preparer could point out to such officials the economy and convenience that would result from the preparation of copy in the form and manner that would expedite its handling in the Government Printing Office and could show them how to eliminate the present prevailing practice of making numerous corrections in type.

An illustration of the delay and expense occasioned by poorly prepared copy or by the making of changes after the manuscript has been set up in type will be given:

This Office is now producing a volume for one of the Federal agencies that will be of interest to a large group of individuals and is cooperating to the fullest extent with the agency to produce a volume as nearly perfect as facilities and abilities will permit. Owing to a lack of understanding in the agency of the numerous printing angles involved, this Office has been kept busy on corrections in proofs to an extent extremely costly. Originally the estimated price for the completed volume was $1, but the unusual number of proofs required and the still more unusual number of corrections in type and in plates, even to the extent of sending new copy for an entire page that had been plated, has raised the price to $2.75 per volume. In addition to the increase in cost, the type will appear in the completed volume with a noticeable unevenness of color owing to numerous corrections, thus greatly detracting from what otherwise would have been a creditable piece of printing. The job reached the Office in March 1938 and due to these changes, corrections, etc., will not be completed before March 15, 1939.

This is cited not as a criticism of the departments or of this particular agency but to illustrate the necessity for the handling of copy in the departments and agencies by, or under, the guidance of an official familiar with the methods of proper copy preparation.

PLATEMAKING DIVISION

During the fiscal year 1938 the Platemaking Division produced 6,456,279 square inches of electrotypes; 6,378,803 square inches of stereotype plates, 522,151 square inches of mat work; 35,808 square inches of blocking on wood and mounting on metal; 66,348 square inches of rubber plates and stamps; 792,049 square inches of photoengraving work; and 1,753,718 square inches of offset work, making a total of 16,005,156 square inches of plates, mat work, blocking and photoengraving, and offset work—an increase of 2,312,769 square inches. This figure includes an increase of 100,000 square inches in offset negatives and the 66,348 square inches of rubber plates above referred to.

The first year's operation of our rubber-plate equipment has shown very interesting developments, one of the most valuable of which has been the reconditioning of a Harris envelope press for rubber plates exclusively. By placing a permanent steel saddle on the old cylinder, thereby increasing the diameter sufficiently to handle a plate of 0.100

of an inch thick, including the backing and adhesive, we are now able to make the plate without any mounting and to deliver it to the pressman, who places it in proper position on the cylinder. Considerable trouble was experienced at first with type being crushed in the molding of the mat. Improvements in mat materials and in experience have completely eliminated this trouble.

As an illustration of the work being handled on rubber plates, this Office recently ran on this reconditioned press an envelope job consisting of a large corner plate, signature, and State line (three plates in all) with 126,000 impressions from one set of plates. These plates were made in 30 minutes and were worn very little upon completion of the job.

The Plate Vault Section handled 30,538 requisitions for printing during the year. This section also released 666,593 pounds of stereotype metal and 313,672 pounds of electrotype metal to be melted and reconditioned for making new plates.

The production in the Photoengraving Section reached a new high this past year. The purchase of a 20 by 24 inch strip film camera makes it possible to photograph a line and a half tone on the same film and so save stripping the two together. It also does away with a silver bath and its care. Half tones have been successfully made up to 150-line screen.

PRESSWORK DIVISION

There was a slight increase during 1938 in the volume of work of the Presswork Division as compared with the year 1937. It was necessary to increase the force during the time Congress was in session in order to run two full 8-hour shifts and a small force on a third shift.

The Offset and Tabulating Card Section had its busiest year in 1938. More equipment is needed to meet the demands for this type of work, but at the present, due to lack of space, additional machinery cannot be installed; it was therefore necessary to authorize the departments to order from private contractors 463,304,000 tabulating cards during the fiscal year 1938. The Government Printing Office printed for the departments and independent establishments 409,149,460 tabulating cards as compared with 332,009,000 for the fiscal year 1937, representing an increase of 77,140,460 cards.

The Postal Card and Money Order Section reports a slight decrease in production for the fiscal year 1938. A total of 2,240,766,100 cards was printed and 262,511,860 money-order blanks. It was necessary to do some night work in order to keep orders up to date during the

moving of the section from the main building into the new warehouse.

By use of the electric drying machine, which was purchased and installed in the Division during the year, the Division has been able to expedite the delivery of embossed envelopes and letterheads. The wet work passing directly from the press through the drier saves considerable space previously occupied by the drying racks and is eliminating the necessity for the extra help which was required when the racks were used.

The printing from rubber plates has now passed the experimental stage and has proved very successful.

BINDERY DIVISION

Work in the bindery during the fiscal year 1938 was of a varied nature and involved several large and unusual orders; among these may be mentioned the Unemployment Census Record Cards, referred to elsewhere in this report; the Yearbook of the Department of Agriculture, of which there were 247,434 copies and which presented quite a problem, as each volume contained 1,505 pages and measured 2¼ inches in thickness. This was entirely beyond the capacity of any of the booklining machines. As these machines perform five operations, it was deemed advisable to alter and readapt them. This was done with the aid of the Machine Section and resulted in a considerable saving, as hand production would have been the only alternative.

Quite recently we introduced in the Pamphlet Bindery an innovation in folding that perhaps has no parallel elsewhere in the printing industry. A small friction feeder was purchased, such as is now used on Model E Cleveland folders, and after undergoing a few changes it was installed on the lower cross carrier of a Model K Cleveland folder. This enables us to run on one machine two different jobs at one time. The upper carrier can run one, two, three, or four parallel folds, while the lower carrier at the same time can be running an entirely different job of either one or two parallel folds, with an additional angle fold if desired.

This attachment has now been in operation for some time with remarkable success, and we contemplate the purchase of additional feeders.

It is readily apparent how advantageous this is when it is considered that 60 percent of our work is parallel folds running on the upper carrier only, meantime leaving the lower carrier idle.

Thus we are gaining an extra machine at a very slight cost without sacrificing additional floor space; further, this feeder is geared to the machine, requiring no additional motors or power.

The feeder does not interfere in any way with the original intended use of the Model K, as all the folds of the latter can be made as usual by a simple movement of a lever disconnecting the gears driving the feeder, the change requiring less than 1 minute and without disturbing or moving the feeder.

Work for the Library of Congress and other departmental libraries was greater in 1938 than in any previous year, 91,404 volumes having been bound as compared with 77,763 in 1937. Much attention was given to this class of work during the past year in an effort to reduce the cost of handling it. This is explained in detail under the heading "Cost Accounting and Production Control Methods."

A reference to table 4 of this report will give some idea of the volume of work handled by this Division during the fiscal year 1938.

CONGRESSIONAL PRINTING

This report covers the printing of the Congressional Record for two sessions of the Seventy-fifth Congress—the second or special session and the third session. The average number of pages daily during the special session was 87.3, while the daily average for 130 issues during the third session was 104.2 pages. The only average larger than this was for 71 issues in the third session of the Seventy-first Congress. The proceedings of the Senate for the two sessions required 5,709 pages and of the House 5,628 pages. The Appendix to the Record and miscellaneous made 5,009 pages, making the total number of pages for the Record for the two sessions of the Seventy-fifth Congress 16,346 pages. There were made 16,138 stereotype plates for the Record, and 2,704,580 pounds, or 1,352¼ tons, of paper were used for the printing thereof.

The total number of hearings printed for the Senate was 127, making 3,043 pages, and for the House 152, making 13,343 pages, or a total of 279 hearings, making 16,386 pages.

The Senate and House Business Calendars are printed daily. During the special and the third session of the Seventy-fifth Congress the House Calendars made 33,864 pages and the Senate Calendars 15,670 pages, or a total of 49,534 pages.

The following statement gives a summary of congressional work for the special session and the third session of the Seventy-fifth Congress:

Class of work	Special session	Third session
Record:		
Total pages	2,795	13,551
Senate	1,011	4,698
House	918	4,710
Appendix and miscellaneous	866	4,143
Daily average	87.3	104.2
Bills:		
Senate:		
New bills	152	1,024
Joint resolutions	21	74
Concurrent resolutions	2	20
Simple resolutions	22	95
House:		
New bills	455	2,152
Joint resolutions	50	177
Concurrent resolutions	1	39
Simple resolutions	43	153
Total new bills	746	3,734
Total prints	1,247	10,864
Total forms	1,876	9,881
Reports:		
Senate	6	919
House	20	1,128
Documents:		
Senate	6	101
House	88	255

LIBRARY OF CONGRESS BRANCH

COMPOSING AND BINDING SECTIONS

During the fiscal year it was necessary to resort to extraordinary measures in this branch in order to meet the demands for increased card production. Among these measures was the establishment of a night force, which operated from January 3, 1938, to the close of the fiscal year. This resulted in an increase in card production of more than 26½ percent over the preceding year—an all-time high.

Due to crowded conditions and lack of facilities, much of the work that should have been performed in these sections was necessarily sent to the main office for completion, with the resultant delay and added expense incidental thereto. However, at the close of the fiscal year plans were well under way to re-equip this branch and to move it into new quarters in the new annex to the Library of Congress. Upon the completion of this move into new and modern quarters, the reorganization incidental thereto, and the replacement of the old and obsolete equipment with new and up-to-date machinery, these branch sections will be in a position to handle all work of the Congressional Library in an efficient and economical manner. The details of these changes and the results thereof will be outlined in the next annual report.

The following statement shows the production record for the Library Composing Section for the fiscal years 1936, 1937, and 1938:

	1936	1937	1938
Chargeable impressions	32, 567, 797	32, 107, 634	38, 076, 724
Actual impressions	2, 753, 728	2, 731, 496	2, 785, 473
Chargeable forms sent to press	17, 434	9, 274	9, 272
Actual forms sent to press	5, 722	5, 174	5, 809
Subject headings—lines sent to press	185, 064	140, 993	127, 617
Subject headings printed	555, 192	426, 332	382, 851
Jackets written	1, 124	1, 142	1, 041
Jackets closed out	1, 116	1, 129	1, 065

STORES DIVISION

Under the heading "Warehouse Building No. 4" is outlined the economies effected and the increased efficiency resulting from moving the Stores Division into its new quarters in the warehouse.

The Stores Division in 1938 received a total of 83,152,863 pounds of paper as compared with 83,604,229 pounds in 1937. Other materials received by the Division in 1938 totaled 1,538,033 pounds.

Orders filled by the Stores Division were as follows: Standard forms, 28,011,194; office forms, 15,029,582; mimeograph ink, 102,208 pounds; printing ink, 210,046 pounds; stamp-pad and numbering-machine ink, (in 2-ounce cans) 46,754 cans; and writing ink, 23,758 quarts.

During the past year the Office has benefited by the free pick-up and delivery service rendered by the railroads, as most of the incoming less-than-carload shipments are now delivered by the railroads without charge, and the Office is availing itself of this service on outgoing shipments whenever the freight rate is high enough to entitle it to free pick-up.

The purchase of new electric fork trucks for the tiering of roll paper has greatly reduced the damage to the rolls that formerly resulted from the handling of the same with crane trucks equipped with hooks, and in a further effort to reduce costs the Office is experimenting with nonreturnable fiber cores for paper in lieu of the usual returnable cores. Since demolition of the old building this division has been greatly handicapped for lack of room. However, with completion of the new warehouse this condition was relieved somewhat, and further improvement is expected when the new building is finished.

DELIVERY SECTION

During the fiscal year 1938 this section handled 55,097,063 pounds of incoming freight. Outgoing carload lots, consisting of metal and cores, numbered 11 cars, and with less-than-carload lots weighed

777,428 pounds. In addition to this outgoing freight there were shipped 9,583,130 pounds of postal cards, making the total tonnage of outgoing freight handled by this section 10,360,558 pounds.

The marked decrease in the tonnage of incoming and outgoing freight handled by this section has been caused by the construction of the siding into the new warehouse and the handling of that work in the Stores Division.

Finished work together with blank paper and ink delivered to the various executive departments and independent Government establishments totaled 178,863 partial and completed jobs. The Delivery Section also handled all of the hauling in connection with the moving of the Storing and Shipping Sections of the Documents Division from the old buildings to their present locations.

MAINTENANCE DIVISION

This Division maintained the buildings and equipment in an efficient operating condition; handled all problems of an engineering character; carried through with its own personnel or by contract all alterations and repairs; designed, constructed, and installed special equipment to meet unusual requirements; prepared specifications for new machinery and equipment; moved and installed machinery and equipment; operated all equipment for power conversion and distribution, refrigeration, heating, lighting, ventilating, air conditioning, and emergency Diesel engine generators; compressed-air service, signal systems, elevators, and conveyors; and cleaned all buildings occupied by the Office.

The personnel of the Division on June 30, 1938, totaled 403, of which number 181 were engaged in operating the power plant and elevators and cleaning the buildings, leaving a force of 222 assigned to the other work outlined above. To this force of 222 is credited a total of 90,419 jobs for the year, of which 68,448 are classed as repairs and the balance of 21,971 includes new work, inspections, adjustments, servicing equipment, making over 20,000 wooden boxes, etc.

Major jobs during the year included preparing quarters and the work incidental to moving the Receiving and Shipping Section of the Superintendent of Documents to temporary quarters at 613 G Street; and the moving of the Money Order and Postal Card Section and Stores Division to the new warehouse.

A considerable amount of disconnecting and rearranging of services was required in connection with vacating the 11 old buildings in the H Street group. Ninety-five old machines were moved during the year and 34 new machines were installed under the direction of the

Machine Section. Much wooden equipment in the Composing Division was replaced with new metal equipment, some of which was made in the Sheet Metal Section of the Maintenance Division.

DIVISION OF TESTS AND TECHNICAL CONTROL

The total number of samples tested by the Division of Tests and Technical Control during the last fiscal year was 8,965. The various materials tested were as follows:

Material	1936	1937	1938
Paper and envelopes	6,750	5,928	5,881
Textiles	914	801	881
Bookbinding leathers	72	92	95
Metals	753	826	736
Glue	25	8	24
Ink-making materials	697	360	376
Inks	30	26	16
Oils and greases	58	58	42
Gasoline	104	69	71
Chemicals	208	203	210
Miscellaneous	789	641	633
Total	10,400	9,012	8,965

There were 209 deliveries rejected for noncompliance with specification. Of these rejections, 118 were of paper, 15 of envelopes, and 76 of miscellaneous materials.

The total amount of paper received during the year was 83,152,863 pounds. Of this amount, 3,086,197 pounds were rejected. The following table shows the causes for all rejections during the year:

Cause of rejection	Number of rejections	Pounds
Deficient in:		
Bursting strength	3	55,050
Folding endurance	18	226,540
Tensile strength	10	460,815
Opacity	11	457,607
Thickness	5	262,940
pH value	9	237,693
Not within weight tolerance	5	77,524
Excessive rosin	3	10,314
Unsatisfactory general appearance	38	816,246
Unsatisfactory color	6	171,537
Unsatisfactory finish	10	309,931
Total	118	3,086,197

Several changes in paper specifications were made during the year. The maximum limitations for rosin content of bond, ledger, and index papers were increased in order to permit improvement in their writing, ruling, and erasing qualities. Requirements for 100-pound supercalendered book paper were added to the paper schedule to meet the

demands of the executive departments. The specified stock for cover paper was modified to permit the use of a greater variety of fibers in this class of papers. The folding endurance requirement for coated book paper and for cover papers has been increased to obtain paper with better folding and creasing qualities.

A pick test requirement has been included in the specifications for coated book paper. This test consists in applying melted sealing waxes of progressive degrees of adhesiveness to the paper and observing which wax causes the paper surface to break, pick, or lift away upon the removal of the wax with a steady vertical pull. The wax number in this series at which the first break in the surface appears is taken as the index number of the adhesion of the surface coating to the paper base.

Paper used by the Library of Congress for mounting maps caused considerable difficulty by breaking when the sheet was wetted for mounting. A search was made for a more suitable paper for this purpose, and specifications were developed and purchase of 100 percent rag map-mounting paper was made under the following requirements, which eliminated further trouble of this sort:

Stock: 100 percent rag.
Weight: 17 by 22 (1,000), 40 pounds.
Folding endurance: Average, each direction not less than 200 double folds.
Wet tensile strength: After exposure to water one-half hour: Machine direction, 2.0 kg; across machine direction, 1.0 kg.
Thickness: Average, 0.0030 inch.
Color finish, and general appearance: Must conform to the standard sample.
General requirements: The paper must be satisfactory for use in conjunction with cloth backing for mounting maps. Fibers must not rub up when paper is wet.

Nonuniformity of thickness of oiled manila tympan paper purchased on contract during the year caused unevenness in the packing of the press cylinders, which resulted in uneven printing. The specifications for this paper were therefore revised in order to obtain a better quality. Tympan paper which has eliminated such difficulties is now being purchased under the following requirements:

Stock: Free from ground wood pulp.
Weight: 24 by 36 (1,000), approximately 210 pounds.
Bursting strength: Average, not less than 60 points.
Thickness: Not less than 0.0067 nor more than 0.0073 inch. Paper must be uniform in thickness and as near to 0.0070 inch as possible.
Oil: Must be evenly distributed and odorless, and the paper must not be greasy to touch.
Formation: Must have uniform closed formation and be free from thin spots.
Surface: Must conform to the standard sample.

The use of light-weight kraft wrapping paper for smut rolls on the web presses proved unsatisfactory, due to wrinkling and breaking. An investigation was conducted to find a more suitable paper for this use in preventing offset, and this resulted in the procurement and adoption of oil-treated paper for such purposes. The following specification was issued for the purchase of this type of paper:

Weight: 24 by 36 (1,000), 80 pounds.
Thickness: Must be uniform, 0.0035 inch.
Bursting strength: Average, not less than 25 points.
Formation: Must be uniform and free from lumps and thin spots.
General appearance: Must conform to sample submitted with request for bid.

The work of evaluating the printing qualities of paper was continued throughout the year. Requirements for smoothness and oil absorption in the specifications for several of the book papers have now been in effect for 2 years with very satisfactory results. By means of these tests the laboratory is able to predict, with some degree of assurance, the printability of the paper. To cite an example: after making oil absorption and smoothness tests on a certain delivery of paper the laboratory predicted that the paper would not be suitable for printing fine screen half tones and that the cuts would not print cleanly and would produce a mottled effect. Prior to rejection of this paper a roll was sent to the pressroom for a trial run. The laboratory prediction of the quality of the resultant printing proved correct.

Since color is one of the important properties affecting printing quality of white papers, considerable stress has been laid upon improving the color tints of the various papers used. In the Annual Report of the Public Printer for 1936 it was stated that the color quality within several classes and grades of paper had been unified and improved printing obtained by changing the standards from a cream to a white shade. During this year the color of offset and supercalendered book papers has also been improved by changing the standards to a more brilliant white. The printing on this whiter paper has shown a decided improvement in the contrast of the black with the white over printing done on less brilliant paper.

In cooperation with the Paper Testing Committee of the Technical Association of the Pulp and Paper Industry and the American Society for Testing Materials, a study was made of several paper-testing methods with a view to developing greater accuracy. In this connection the following is submitted:

The purpose of the rosin determination is to determine the amount of rosin size added to the paper during manufacture. Paper made

from wood pulp contains resins originating from the wood, and paper made from rag pulp contains unsaponifiable waxes, neither substance being completely removed from the pulp before the paper is formed. The present TAPPI method T–408m does not provide for the separation of unsaponifiable waxes or other alcohol-soluble foreign matter from the rosin contained in paper. Therefore, the reported rosin content of such papers as determined by analysis is higher than the actual rosin content.

Since this objection to the present TAPPI method has been advanced, a laboratory study was made of a proposed revision of the method which provides for a more precise determination of the rosin content of papers. A study was also made of the efficiency of a proposed revision of TAPPI Method T–429m–36 in the form of a volumetric method for the determination of alpha, beta, and gamma cellulose, obviating the present time-consuming determinations. We found this method offers a decided advantage over the present TAPPI method in simplicity and that it saves considerable time and work.

The method of sampling of paper for testing was found inadequate by subcommittee 1 of D–6, American Society for Testing Materials, in that it does not assure that the sample is truly representative of the shipment and that it was written primarily for the sampling of paper in sheets.

The Technical Director, who is a member of this committee, was given the assignment by the committee chairman to study the literature and prepare an improved method for the sampling of paper for testing purposes. A new method has been written and presented to the committee for its consideration.

Considerable research has been conducted by investigators, both in this country and abroad, on the subject of paper deterioration, and this is being widely discussed at present. The findings of these investigators have been scattered throughout various publications in this and foreign countries. The importance of this subject is becoming more widely recognized as indicated by the large number of inquiries which we receive from libraries and paper users. The Division of Tests and Technical Control has compiled and classified more than 300 articles pertaining to permanence and durability of paper dating from 1885 to the present time. This compilation is being published as Technical Bulletin No. 22 of the Government Printing Office.

Paper, being composed of a felted mass of minute vegetable fibers, is hygroscopic and therefore susceptible to changes in atmospheric

conditions. It absorbs or gives off moisture with every change in the amount of water vapor in the air. With an increase in relative humidity the individual fibers absorb more moisture and consequently expand. The additive swelling of the fibers causes a lengthening of the sheet. Decrease in the relative humidity causes contraction of the paper stock. Marked dimensional changes of paper are thus caused by the amount of moisture absorbed or given up during changes in relative humidity of the surrounding air.

Certain types of paper purchased by this Office are required to possess properties of the lowest possible coefficient of expansion and contraction, in order that dimensional changes be reduced to a minimum essential for best operating conditions.

In order to test these properties of paper, an apparatus has been designed for measuring the expansion and contraction of paper under varying humidity conditions.

During the year the number of envelopes purchased totaled 76,016,000. Of these purchases, 15 deliveries or 942,000 envelopes were rejected. The following is a tabulation of the causes of rejections and the quantities of rejected envelopes for the fiscal year 1938:

Cause of rejection	Number of deliveries	Number of envelopes
Deficient in:		
Stock	1	500
Folding endurance	14	941,500
Total	15	942,000

Ink

The total production of printing inks, including mimeograph, stamp-pad, and numbering-machine inks, for the year was 322,130 pounds, an increase of 23,901 pounds over last year.

There were also produced a number of miscellaneous products, which are classified as follows:

Material:		*Quantity*
Blue toner	pounds	23,430
Molding wax compound	do	200
Turpentine substitute for lithography	do	312
Electrotype backing fluid	quarts	120
Ruling inks	do	3,143
Writing inks (all colors)	do	18,106
Striping ink for tabulating cards	do	674
Special ink solvent	do	1,600
Lacquer thinner	do	680
Mucilage	do	340

Other Government departments and agencies were furnished with miscellaneous materials manufactured by the Government Printing Office.

The following tabulation compares the quantities of different materials furnished to Government departments and independent establishments during the fiscal years 1937 and 1938.

Material	Pounds		Material	Pounds	
	1937	1938		1937	1938
Mimeograph ink, black	90,127	107,897	Check-signature ink	332	683
Printing ink, black and colored, including multigraph	7,494	13,498	Letter-box time-card ink	122	76
Addressograph ink, blue and black	78	36	Special ink solvent	[1] 404	[1] 428
Writing ink (all colors)	[1] 24,048	[1] 18,578	Molded glue, including canceling stamp composition	3,517	2,591
Stamp-pad and numbering-machine ink	4,420	6,074	Paste	9,337	11,173
			Roller composition		602

[1] Quarts.

Occasional difficulty was encountered during the year with the feathering of ruling inks when applied to paper having insufficient sizing. Investigational work to overcome this difficulty led to the addition of a suitable chemical to the ruling inks, which served to minimize feathering.

At the request of the District government a purple copying ink was developed for printing, which permitted 100 reproducible copies from a single imprinted original.

A blue printing ink which does not record during photographic reproduction was made for Office use.

At the request of the Bureau of Ordnance of the Navy Department, machine-gun target-marking inks for use in spotting bullets to record accuracy of firing were developed in black, yellow, brown, purple, dark blue, light blue, medium blue, white, and amber colors.

Type Metal

The total amount of type metal standardized during the fiscal year 1938 was 9,999,767 pounds, an increase of 642,197 pounds or 6.87 percent over the preceding year.

The following table gives in detail the various quantities of metal employed in the correction of the various type metals to standard formulas. This includes the metal returned for remelting, correction metal, dross, percentage increase due to correction, and percentage loss due to drossing, calculated on the quantity of metal remelted:

	Universal	Electrotype	Slug
Returned for remelting ..... pounds	9,268,977	734,185	34,486
Correction metal used:			
Lead-antimony alloy ..... do	9,001	2,929	.....
Tin ..... do	8,185	572	.....
Lead ..... do	83,264	65,952	.....
Total ..... do	100,450	69,453	34,486
Total corrected metal ..... do	9,180,106	785,175	.....
Dross ..... do	189,321	18,463	.....
Increase due to correction ..... percent	1.08	9.46	.....
Loss due to dross ..... do	2.04	2.51	.....

Universal metal, containing 6 percent tin, 12 percent antimony, and the remainder lead, was used for all type casting and line casting and for all stereotype casting throughout the year.

During the year 7,509 pounds of tin, 20,224 pounds of lead-antimony alloy, 115,512 pounds of lead, and 50,000 pounds of Universal metal were purchased by cash payment. In addition, 360,000 pounds of electrotype backing metal and 416,000 pounds of Universal metal were bought, for which the following materials were exchanged in partial payment:

	Pounds
Old electrotype plates	450,000
Stereotype plates	200,000
Slug metal (solid body)	20,000
Universal metal dross	176,058
Electrotype dross	19,133
Electrotype shells	11,753
Old brass	3,697
Copper scrap	983
White bearing metal	170

Press Rollers and Adhesives

Press rollers manufactured during the year required 25,228 pounds of composition and totaled 4,465 in number. This shows an increase of 143 rollers over the number of last year's production, which totaled 4,322, requiring 26,625 pounds of composition. Of the number manufactured this year, 1,095 were mechanically coated upon a specially prepared core by a process whereby the core is rotated as the hot composition is evenly deposited upon it. For this purpose 134 base rollers, having a foundation of a tough and resilient composition over the steel core, were purchased during the year.

Progress in improving the quality of our rollers has been made possible by experimental work with chemical compounds such as glycerine substitutes. Sorbitol, a hexahydric alcohol, one of the

most recent chemicals adapted to this purpose, has been used in partial substitution for glycerine in rollers manufactured throughout the year. Loss of moisture causes the shrinking and hardening of composition rollers, and the presence of a hygroscopic substance such as glycerine or sorbitol reduces that loss. Sorbitol is a very effective hygroscopic agent for this purpose. It has a narrower humectant range and is less susceptible to changes in atmospheric conditions than glycerine; therefore at high atmospheric humidities it takes on less moisture than glycerine. At low humidities it dries out slower than glycerine and thus has a stabilizing effect on the moisture content of the rollers.

Inasmuch as sorbitol in itself imparts toughness and tack to composition rollers, an investigation was conducted to ascertain whether or not any additional advantages could be derived from the continued use of tannic acid and varnish in roller composition containing sorbitol. Observation indicated that tannic acid, which proved incompatible with roller composition containing sorbitol when cast in steel molds, confers no particular advantage to composition containing sorbitol; therefore it has been entirely eliminated from our formulas and the varnish content reduced to one-half the former quantity.

The adhesive usually employed on folding machines in the bindery to paste a certain kind of paper failed on one occasion to stick properly. Investigation into the causes of this particular failure of the paper to seal led to development and substitution of a better special adhesive which functioned very satisfactorily on the folding machines.

The use of dextrine adhesive for gumming paper in gumming machines caused, in the case of certain papers, considerable curl while drying out. The formula for the gum solution was therefore modified to impart greater flexibility to the adhesive, which reduced the tendency of the gummed paper to curl.

The manufacture of molded glue during the fiscal year totaled 126,070 pounds as compared with 111,005 pounds last year. The manufacture of glucose-glycol paste amounted to 25,000 pounds and of flour paste 94,000 pounds as compared with 25,000 and 85,000 pounds, respectively, last year.

Bookbinding Research

Manufacturers of pyroxylin-impregnated fabrics were requested to submit samples of their standard grades of cloth for a technical survey of this relatively new type of bookbinding material. The several kinds and weights used on Government bindings were requested. Nine manufacturers complied with the request and submitted 38 samples for test purposes.

Pyroxylin-impregnated fabrics are similar in appearance to the formerly used starch-filled fabrics, but, in place of starch, the filler is pyroxylin, a soluble cellulose product, which is compounded with pigment and filler to produce a finish that is both washable and resistant to attack by book-destroying insects such as the silverfish and roach and to atmospheric conditions. These advantageous qualities were recognized by this Office, and the regular use of these binding fabrics was adopted last year.

The several deliveries of pyroxylin-impregnated fabrics first received were found not as easy to bind as starch-filled book cloths because of the moisture-proof nature of the finish, which prevented somewhat the penetration of the binding adhesives. It soon became evident, however, that certain modifications in regular bindery practice were necessary in order to obtain good results with pyroxylin-impregnated cloths. Such troubles as slippage between cloth and boards on automatic case-making machines, poor adhesion of title leather and labels, warping of cases, insufficient adhesion of end sheets, irregular quality of stamping, and difficulty in hand lettering were experienced with various brands. These difficulties were discussed in conferences with representatives of the contractors, and certain modifications were made in the manufacture of these fabrics to make the material bind with greater facility. Some mills produced cloths with water-soluble sizings on the reverse side to improve the adhesion of paste or glue, and the finish or the composition of the filler was modified to render it more receptive to stamping and labeling operations.

An investigation is now being conducted with a view to developing laboratory testing methods which will reasonably predict the behavior of the pyroxylin-impregnated fabrics when subjected to binding operations. This includes technical laboratory tests and bindery tests observed under operating conditions. Technical tests involving the usual properties of weight, thread count, tensile strength, etc., were made in accordance with methods prescribed in Commercial Standard CS–57–36 and also by specially developed tests. Tests were also conducted on both the face and back of the samples using an electrometric size tester to determine moisture penetration. The object was to ascertain whether or not this instrument could be used to serve as an index of the penetration of bindery adhesives and thus the degree of their binding action. Accelerated aging tests were included in this investigational work.

The bindery tests consisted of binding a series of ten dummies and three books in each of the cloths submitted. Five of the dummies

were made using our formula A flexible glue on the cloth, and flour paste on the end sheets. The other five dummies were bound with formula A flexible glue on the cloth, but glucose-glycol paste was used on the end sheets. One book was cased-in by using glucose-glycol paste both on the fabric and the end sheets. Another book was bound with formula A glue on the cloth and glucose-glycol paste on the end sheets, and the third book was bound with formula A flexible glue on the cloth and flour paste on the end sheets.

Eight of the ten dummies were stamped or hand-lettered, using eight different materials, namely: ordinary book-cloth ink, special pyroxylin ink, aluminum leaf, egg-sized hand-lettered gold leaf, egg-sized stamped gold leaf, paper-backed gold leaf, flat imitation gold leaf, and roll imitation gold leaf. Tests were made on the two remaining dummies for the adhesion of title leather using six combinations—namely, flour paste, alcohol wash followed by flour paste, glucose-glycol paste, alcohol wash followed by glucose-glycol paste, flour paste containing 10 percent diethylene glycol, and alcohol wash followed by flour paste containing 10 percent diethylene glycol.

All samples of bindery work were conditioned at 70° F. and 65 percent relative humidity for 24 hours, then examined and rated from poor to excellent according to the judgment of the investigator.

Further work, including the determination of color fastness and stamping on various colored cloths, will be conducted during the year to complete this investigation.

Cooperative research with the Bureau of Chemistry and Soils, United States Department of Agriculture, to develop more permanent bookbinding leathers has been continued. Previous research has shown that vegetable-tanned bookbinding leathers deteriorate primarily because of absorption of acids from the air. Recent research work undertaken by the Bureau of Chemistry and Soils has shown that this relatively rapid deterioration of these leathers can be reduced and their permanency increased by the use of certain tanning agents which will result in leathers offering a high degree of inherent resistance to rot.

Consideration was therefore given to the feasibility of substituting chrome-tanned or combination vegetable-chrome tanned leathers in place of vegetable-tanned leathers. A number of American tanners were requested to submit sample skins of this type manufactured under tentative specifications for chrome tanning.

During the year special attention was given to accelerated aging tests in which the forced deterioration artificially produced would be equivalent to that which would occur in the same leather over a period

of years under actual atmospheric conditions. This test consists in exposing specimens of experimental leathers in a special chamber to the fumes produced by burning illuminating gas containing sulphur compounds. These compounds, by chemical reaction, form sulphur dioxide and in turn sulphuric acid, which in some cases may accumulate in the leather to an extent of more than 5 percent in 18 weeks. At the end of 18 weeks of exposure the leathers are again tested for their physical and chemical properties and compared with the tests made before exposure to the fumes in the chamber. The amount of deterioration is estimated by the loss in tensile strength.

These tests indicate that there is a marked difference in the permanence of full-chrome and combination vegetable-chrome tanned leathers as shown by the following percentage losses in tensile strength after 18 weeks in the gas chamber:

Full-chrome tannage		Combination vegetable-chrome tannage	
Sample	Percentage loss in tensile strength	Sample	Percentage loss in tensile strength
	Law sheep		*Law sheep*
No. 3	40	No. 2	48
No. 4	43	No. 15	59
No. 5	54		
No. 6	23		
	Goatskin		*Goatskin*
No. 9	43	No. 7	74
		No. 8	70
		No. 10	65
		No. 13	81
		No. 14	82
	Cowhide		*Cowhide*
No. 11	29	No. 12	50

The low resistance of the combination vegetable-chrome tanned leathers, especially samples Nos. 13 and 14, is not in harmony with previous findings. After 18 weeks of exposure in the gas chamber these, leathers lost 81 and 82 percent, respectively, of their original strength. This indicates a permanency equal only to the usual vegetable-tanned leathers. It appears that materials or processes may be employed in the commercial production of some leathers in such a way as to offset the added resistance ordinarily imparted by chrome. Further investigations are therefore planned to determine what these adverse influences may be and how they may be avoided by the application of tests and tannage specifications.

As a result of experience gained in actual binding with experimental chrome-tanned leathers and those purchased for testing, it was found desirable to revise the requirements for tannage in the specifi-

cations for chrome-tanned leathers. The specifications now permit a chromic oxide (Cr_2O_3) content of not less than 3 percent, in the case of straight chrome and between 1 and 2 percent for the combination tanned leathers, whereas formerly these required not less than 2 percent chromic oxide in the tannage.

During the year all purchases for sheepskin and goatskin leathers were made on specifications requiring chrome tannage, thus eliminating vegetable-tanned sheep and goat skin leathers from use in the Government Printing Office.

A purchase was made of a trial lot of combination vegetable-chrome tanned cowhide leather. This leather was subjected to the various binding operations to ascertain its suitability for bookbinding. The following report was made by the Superintendent of Binding:

> The leather lends itself satisfactorily to the different binding processes, being soft and pliable, hence well adapted to the forwarding process. It is equally satisfactory in the finishing process; therefore its use is recommended.

In cooperation with the Bureau of Chemistry and Soils efforts will be continued to interest American tanners in developing the regular commercial production of more permanent leathers for the bookbinding trade.

Research on a number of bookbinding problems was continued in cooperation with the Employing Bookbinders of America and the Book Manufacturers' Institute of America under the Research Associate Plan.

The value of this cooperative research work was expressed by Mr. E. W. Palmer, president of the Kingsport Press, Kingsport, Tenn., and chairman of the research division, Book Manufacturers' Institute, in a report to the Public Printer dated March 1938, in which he states:

> Even the briefest résumé of the work of the research associate and the research division of the Book Manufacturers' Institute (formerly the Employing Bookbinders of America) must be quite general in scope. Back in 1929, when the position of research associate was established in the Government Printing Office, the graphic arts industry, and particularly the bookmaking branch, was notable for its total lack of materials specifications, the lack of any adequate and systematic testing of materials, the absence of any established trade standards covering manufacturing technique; in short, it was hopelessly behind the times.
>
> To say, generally, that we have made noteworthy advances along many fronts is to provide a question which may best be answered by a brief summary of objectives undertaken, and partially attained.

In this connection there is presented a brief résumé of the past research work and a detailed description of the present research, together with an outline of proposed future investigations.

Studies of various bookbinding materials have been made under a classification of general research and standardization, as a result of which three commercial standards have been developed. These were adopted by the bookbinding industry and approved by the American Standards Association. These Commercial Standards are: CS 49–34 Chip Board, Laminated Chip Board, and Miscellaneous Boards for Bookbinding Purposes; CS 50–34 Binders Board for Bookbinding and Other Purposes; and CS 57–36 Book Cloths, Buckrams, and Impregnated Fabrics for Bookbinding Purposes Except Library Bindings.

Extensive investigations in the field of bindery adhesives led to (1) the development of a glucose-glycol paste which practically eliminates the warping of book covers; (2) the use of one grade only of animal glue, of a high jell strength and a high viscosity, for making flexible glues for bindery use; and (3) the knowledge that certain recently developed chemical compounds may be successfully used as substitutes for glycerin in flexible glue compositions.

Various materials, such as end papers, supers or crash, and sewing thread, used in the binding of books, have been studied with reference to their efficient functioning in operations. A thorough investigation of imitation gold leaf has been made and a procedure standardized for determining the comparative tarnish resistance of the various brands of that leaf, both flat and in the form of rolls.

Within recent years States have adopted various specifications for the printing and binding of their textbooks supplied, under contract, to the pupils in their schools. A movement, supported by textbook publishers and manufacturers and State boards of education, has been started to unify those specifications to make them suitable for use in all States of the Union. We have rendered all possible assistance in connection with the technical phases of the specifications to a joint committee engaged in this undertaking. During the course of this research several technical bulletins dealing with bookbinding materials were published.

Based on information furnished by the Research Associate a slight revision was made in Commercial Standard CS 57–36, which became effective May 6, 1938. The specified weight of stripped cloth of group E fabrics was changed from 6.5 ounces per square yard to 6 ounces per square yard.

In connection with the study of chemical substitutes for glycerin in flexible glue compositions, sorbitol was subjected to experimental tests. This compound, when used in flexible glue compositions, as a substitute for glycerin on a pound-for-pound basis, gave very satis-

factory results. It increased the viscosity of the composition and caused it to dry out more slowly under low humidity conditions. Thus far three of the flexible-glue formulas most generally used have been revised to include sorbitol. The new formulas are as follows:

FORMULA A.—*For general bindery use*

	Percent		Percent
Glue	22. 60	Beta naphthol	0. 10
Sorbitol	10. 25	Terpineol	0. 10
Glycerin	10. 25		
Water	56. 70		100. 00

FORMULA B.—*For use on gathering, stitching and covering machines*

	Percent		Percent
Glue	36. 4	Beta naphthol	0. 15
Sorbitol	8. 3	Terpineol	0. 15
Glycerin	8. 3		
Water	46. 7		100. 00

FORMULA D

	Percent		Percent
Glue	26. 5	Beta naphthol	0. 15
Sorbitol	13. 25	Terpineol	0. 15
Diethylene glycol	13. 25		
Water	46. 7		100. 00

Wherever glue is specified in the above formulas the grade is that which has a jell strength of not less than 400 grams; a viscosity of not less than 130 nor more than 140 millipoises; and a pH of not less than 6.4 nor more than 7.

Experience in the use of these revised formulas during the past year led to the elimination of formula E in our manufacture.

In planning the future trend of this cooperative research work a program has been developed for its guidance over several years. A brief outline of this program is submitted:

I. SPECIAL RESEARCH:
- Adhesives for Bindery Use:
  - Investigate substitutes for glycerin in flexible glue compositions.
  - Investigate new adhesives and formulas.
- Sizings:
  - For stamping on roll and flat leaf, gold and foil, pyroxylin-treated fabrics, cellophane, Kodapak, and other new materials.
  - For gilding new types of paper.
  - For cover turn-ins on new materials.
- Inks:
  - Quick-drying inks for pyroxylin-treated fabrics and for latex-treated fabrics and papers.
  - New spray compounds to prevent ink offset from stamped covers.

Book Cover Plastics:
For processing, adhesion to books, joints, covers, and for surface protection of covers.
Machine Wrapping and Sealing:
For single books and packages in kraft, glassine, and cellophane and suitable adhesives therefor.
Pyroxylin-Treated Fabrics:
Continue study of both the impregnated and coated materials to effect uniformity and ease of processing.
Insects and Vermin:
Continue research on types and effects of encroachment.
Development of repellants for use in materials and adhesives.

II. Research to Effect Standardization of—
Sewing thread.
Muslin and tape cloths.
Sewing tapes.
Headbands.
Back-lining papers.
End papers.
Supers (crash cloths).
Other materials as the need develops.

III. State Textbook Specifications and Standards:
Continue work with national committee.
Continue testing and the collection of data for revision and maintenance of standards.

Publications

Much interest was manifested throughout the printing industry in the chapter on Communication by Printing and Photography submitted by the Public Printer for publication in "Technological Trends and National Policy" by the National Resources Committee. This chapter was therefore reprinted in booklet form for separate distribution. This publication has attracted considerable attention in trade magazines and we have received many requests for copies from individuals and public libraries:

In Printing, vol. 62, No. 3: 46 (March 1938) in an article entitled "Science Moves Printing Forward" the following appeared:

Communication by Printing and Photography, by A. E. Giegengack, United States Public Printer, published by Government Printing Office, 37 pages. Increased and more skillful use of color in printing, television and teletypesetting, more faithful photographic reproduction with polarized light and infrared rays, improved platemaking methods and other current developments in the Graphic Arts are covered in this booklet. It was written as a chapter in the National Resources Committee's 1937 report to the President on Technological Trends and National Policy.

In his treatment of each phase of the Graphic Arts, Mr. Giegengack includes enough history for understanding background, then goes on to explain the new

inventions, showing that persistent research is constantly improving each step in printing; that it promises broad advances in the future, impossible to predict in detail.

In The National Lithographer, January 1938, page 80, there appeared the following:

Communication by Printing and Photography. National Lithographer, 44, No. 12, December 1937. This article consists of excerpts from the report of A. E. Giegengack, Public Printer, as a part of the report of the United States National Resources Committee on Technological Trends and National Policy. The complete report is obtainable from the Superintendent of Documents, Washington, D. C., for $1. Mr. Giegengack's article reviews the technological trends in printing and photography with the object of indicating the directions in which technical developments will take place within the next 10 to 25 years.

A detailed review of this article by D. M. MacMaster was also published in the December 1937 issue of the Inland Printer.

A large number of letters were received requesting further information relative to some of the various printing processes discussed in this publication.

An article entitled "The Relationship of the Government Printing Office to the Paper Industry" was prepared at the request of the editor of The Paper Industry and published in the May 1938 issue. In this article an outline is given of the various grades of paper and the quantity and cost of paper annually purchased by the Government Printing Office. A brief review is given of the paper research conducted by the Office with a list of publications bearing upon the subject. Several publications sold by the Superintendent of Documents and of special importance to engineers and chemists are also mentioned.

Assistance to Other Departments

As in previous years, the Government Printing Office, through the Division of Tests and Technical Control, has rendered valuable assistance to the various Government departments in connection with paper, ink, type metal, glue, bookbinding, various printing processes, and other technical problems. An example may be cited:

At the request of Mr. James A. Horton, Chief Examiner of the Federal Trade Commission, a series of photographic exhibits were prepared illustrating the various screen patterns in half-tone printing, showing the characteristics of the three major processes of printing as they appear when viewed through a microscope. The photomicrographs were prepared to assist the Commission in an investigation

whereby they could, through microscopic comparison of certain questionable specimens of printed matter, definitely classify them as to the printing methods employed.

Contact with Printing, Binding, and Allied Organizations

The Division of Tests and Technical Control has continued to maintain cooperative contacts with the United Typothetae of America, Lithographic Technical Foundation, American Newspaper Publishers Association, Technical Association of the Pulp and Paper Industry, American Society for Testing Materials, Graphic Arts Research Bureau, The Research Commission of the International Association of Printing House Craftsmen, Inc., American Standards Association, and the Printing and Allied Trades Research Association of Great Britain.

Correspondence

Numerous letters of inquiry pertaining to the graphic arts were received from all parts of the United States and also from other countries. The preparation of replies to these sometimes involves tests or literary references or other investigational work, which often brings to light information mutually helpful.

RECEIPTS AND EXPENDITURES

The total resources available to the Government Printing Office during the fiscal year ended June 30, 1938, including the Office of the Superintendent of Documents and appropriations and payments for work, amounted to $19,778,914.79 as compared with $19,975,107.28 for the fiscal year 1937, a decrease of $196,192.49.

Obligations incurred during the fiscal year 1938 totaled $19,754,749.30, leaving an unobligated balance of $24,165.49 subject to overadjustments or underadjustments on approximately $1,884,544.30 outstanding obligations to July 1, 1938. Obligations incurred in 1938 showed a decrease of $175,389.42 from those for 1937.

The total compensation paid to all employees, including those of the Office of the Superintendent of Documents, during the fiscal year 1938 amounted to $12,128,807.46, which total included $422,692.33 deposited to the credit of employees in the retirement fund through the 3½ percent deduction as required by law.

Table 1 gives the details of all resources available to the Government Printing Office for the fiscal year ended June 30, 1938, and all liabilities incurred against these resources during the fiscal year.

TABLE 1.—*Resources and liabilities under appropriations for the fiscal year ended June 30, 1938*

RESOURCES		
Appropriation for working capital, legislative act approved May 18, 1937	$3,800,000.00	
Second Deficiency Act, approved June 25, 1938	408,000.00	
Payments from all sources for printing and binding	14,203,776.31	
Refunds from various sources	206.28	
Bills receivable July 1, 1938, for printing and binding furnished	549,857.62	
		$18,961,840.21
Appropriation for salaries, Office of Superintendent of Documents		600,000.00
Appropriation for general expenses, Office of Superintendent of Documents		215,000.00
Balance of appropriation for equipment for Government Printing Office building		[1] 670.36
Texas Centennial Exposition, act of August 12, 1935		4.22
Greater Texas and Pan American Exposition, Public Resolution No. 21, Apr. 9, 1937		1,400.00
Total resources available for fiscal year 1938		19,778,914.79
LIABILITIES		
Working capital and repayments for printing and binding:		
Disbursed to June 30, 1938	$16,142,569.96	
Outstanding obligations July 1, 1938	1,798,555.46	
Total disbursed and outstanding obligations		17,941,125.42
Salaries, Office of Superintendent of Documents:		
Disbursed to June 30, 1938	$569,723.24	
Outstanding obligations July 1, 1938	26,976.06	
Total disbursed and outstanding obligations		596,699.30
General expense, Office of Superintendent of Documents:		
Disbursed to June 30, 1938	$156,205.70	
Outstanding obligations July 1, 1938	58,644.30	
Total disbursed and outstanding obligations		214,850.00

[1] Appropriated in 1929, available until used.

TABLE 1.—*Resources and liabilities under appropriations for the fiscal year ended June 30, 1938*—Continued

LIABILITIES—Continued

Equipment, Government Printing Office building:		
Disbursed to June 30, 1938	$301. 88	
Outstanding obligations July 1, 1938	368. 48	
Total disbursed and outstanding obligations		$670. 36
Texas Centennial Exposition:		
Disbursed to June 30, 1938	$4. 22	
Outstanding obligations July 1, 1938	0	
Total disbursed and outstanding obligations		4. 22
Greater Texas and Pan American Exposition:		
Disbursed to June 30, 1938	$1, 400. 00	
Outstanding obligations July 1, 1938	0	
Total disbursed and outstanding obligations		1, 400. 00
Total disbursed to June 30, 1938	$16, 870, 205. 00	
Total outstanding obligations July 1, 1938	1, 884, 544. 30	
Outstanding obligations returnable to U. S. Treasury	1, 000, 000. 00	
Total disbursed and outstanding obligations		19, 754, 749. 30
Unobligated balances (subject to 10 percent over or under on outstanding orders)		[2] 24, 165. 49
Total		19, 778, 914. 79

[2] Includes $368.48, equipment for Government Printing Office building, available 1939.

Table 2 is a summary statement showing all financial transactions during the fiscal year ended June 30, 1938, covering appropriations made for the fiscal years 1936, 1937, and 1938. This statement also gives a summary of all expenditures for various items during the fiscal year 1938, regardless of the appropriation from which paid, together with a recapitulation of disbursements by major items.

TABLE 2.—*Summary of financial transactions in fiscal year ended June 30, 1938, covering appropriations for fiscal years 1936, 1937, and 1938*

APPROPRIATION FOR 1936

	Resources	Disbursements	Unexpended balance on July 1, 1938, from the appropriation for 1936
Public printing and binding:			
Unexpended balance July 1, 1937	$146,836.01		
Credits to appropriation by payments from all sources for printing and binding and other receipts from miscellaneous sources	3,397.79		
Disbursed for labor		$56.34	
Disbursed for material and supplies		17,623.71	
Total	150,233.80	17,680.05	$132,553.75
Salaries, Office of Superintendent of Documents: Unexpended balance July 1, 1937	9,606.71		9,606.71
General expense, Office of Superintendent of Documents:			
Unexpended balance, July 1, 1937	15,849.48		
Disbursed		15,830.84	
Total	15,849.48	15,830.84	18.64
Grand total appropriations	175,689.99	33,510.89	142,179.10
Unobligated balance of 1936 appropriations on June 30, 1938			142,179.10

APPROPRIATION FOR 1937

	Resources	Disbursements	Unexpended balance on July 1, 1938, from the appropriation for 1937
Public printing and binding:			
Unexpended balance July 1, 1937	$1,038,757.64		
Credits to appropriation by payments from all sources for printing and binding and other receipts from miscellaneous sources	2,083,792.05		
Disbursed for labor		$485,888.83	
Disbursed for paper		1,233,412.64	
Disbursed for lithographing and engraving		51,848.63	
Disbursed for materials and supplies		200,070.60	
Disbursed to surplus fund		1,000,000.00	
Total	3,122,549.69	2,971,220.70	$151,328.99
Salaries, Office of Superintendent of Documents:			
Unexpended balance July 1, 1937	41,739.12		
Disbursed		26,221.39	
Total	41,739.12	26,221.39	15,517.73
General expense, Office of Superintendent of Documents:			
Unexpended balance July 1, 1937	62,554.89		
Disbursed		62,311.21	
Total	62,554.89	62,311.21	243.68
Grand total appropriations	3,226,843.70	3,059,753.30	167,090.40
Deduct for outstanding obligations			108,354.43
Unobligated balance of 1937 appropriations on June 30, 1938			58,735.97

TABLE 2.—*Summary of financial transactions in fiscal year ended June 30, 1938, covering appropriations for fiscal years 1936, 1937, and 1938*—Continued

APPROPRIATION FOR 1938

	Resources	Disbursements	Unexpended balance July 1, 1938
Public printing and binding:			
Legislative act of May 18, 1937	$3,800,000.00		
Second Deficiency Act of June 25, 1938	408,000.00		
Credits to appropriations by payments and bills receivable from all sources for printing and binding and other receipts from miscellaneous sources	14,753,840.21		
Disbursed for labor		$11,060,150.87	
Disbursed for paper		4,198,589.15	
Disbursed for lithographing and engraving		47,816.45	
Disbursed for materials and supplies		836,013.49	
Total	18,961,840.21	16,142,569.96	$2,819,270.25
Salaries, Office of Superintendent of Documents:			
Legislative act of May 18, 1937	600,000.00		
Disbursed		569,723.24	
Total	600,000.00	569,723.24	30,276.76
General expense, Office of Superintendent of Documents:			
Legislative act of May 18, 1937	215,000.00		
Disbursed		156,205.70	
Total	215,000.00	156,205.70	58,794.30
Equipment, Government Printing Office building, legislative act of Feb. 28, 1929:			
Unexpended balance July 1, 1937	[1] 670.36		
Disbursed to June 30, 1938		301.88	
Total	670.36	301.88	368.48
Texas Centennial Exposition Act of Aug. 12, 1935, approved Aug. 12, 1935:			
Unexpended balance July 1, 1937	4.22		
Disbursed to June 30, 1938		4.22	
Total	4.22	4.22	
Greater Texas and Pan American Exposition:			
Public Resolution No. 21, approved Apr. 9, 1937	1,400.00		
Disbursed to June 30, 1938		1,400.00	
Total	1,400.00	1,400.00	
Grand total appropriations	19,778,914.79	16,870,205.00	2,908,709.79
Deduct for outstanding obligations			2,884,544.30
Unobligated balances of 1938 appropriations on June 30, 1938			[2] 24,165.49
Total unobligated balance, subject to change by 10 percent over and under on outstanding obligations:			
1936			142,179.10
1937			58,735.97
1938			24,165.49
Total			225,080.56

[1] Appropriated Feb. 28, 1929, available until used.
[2] Includes $368.48, equipment Government Printing Office building, available 1939.

Table 2.—*Summary of financial transactions in fiscal year ended June 30, 1938, covering appropriations for fiscal years 1936, 1937, and 1938*—Continued

RECAPITULATION—ALL APPROPRIATIONS

Total paid for labor	[1] $11,546,096.04
Total paid for materials and supplies	1,053,707.80
Total paid for lithographing and engraving	99,665.08
Total paid for paper	5,432.001.79
Total paid for printing and binding	18,131,470.71
Total paid for salaries, Office of Superintendent of Documents	[2] 595,944.63
Total paid for general expense, Office of Superintendent of Documents	234,347.75
Total paid for equipment, Government Printing Office building	301.88
Total paid for Texas Centennial Exposition	4.22
Total paid for Greater Texas and Pan American Exposition	1,400.00
Total credited to surplus fund	1,000,000.00
Grand total	[3] 19,963,469.19

[1] Includes $385,119.46 deposited to credit of retirement fund.
[2] Includes $19,538.14 deposited to credit of retirement fund.
[3] Includes $404,657.60 deposited to credit of retirement fund.

Table 3 is a statement of all moneys received during the fiscal year ended June 30, 1938, by the Disbursing Clerk as repayments for printing and binding for the several executive departments and independent Government establishments, and from the sale of waste paper and other waste materials, and the appropriation to which deposited. The receipts from these various sources during 1938 totaled $15,384,081.18 as compared with $15,659,170.69 in 1937.

TABLE 3

1919		
Deposited to the credit of appropriation for public printing and binding: Dual service		$11.00
1935		
Deposited to the credit of appropriation for public printing and binding:		
For printing and binding for departments	$319.75	
Refunds	15.00	
Auditor's disallowance	1.50	
		336.25
1936		
Deposited to the credit of appropriation for public printing and binding:		
For printing and binding for departments	$5,593.48	
Refunds	2.10	
		5,595.58

1937		
Deposited to the credit of appropriation for public printing and binding:		
For printing and binding for departments	$2, 084, 288. 96	
Miscellaneous printing and binding	1, 778. 20	
Refunds	1, 744. 07	
		$2, 087, 811. 23
1938		
Deposited to the credit of appropriation for public printing and binding:		
For printing and binding for departments	$13, 113, 815. 10	
Miscellaneous printing and binding	101, 965. 29	
Refunds	902. 06	
Damage to Government property	2. 75	
		13, 216, 685. 20
1930		
Deposited to the credit of appropriation for salaries, Superintendent of Documents: Refund		360. 00
1937		
Deposited to the credit of appropriation for salaries, Superintendent of Documents: Balance of appropriation		50. 14
1938		
Deposited to the credit of appropriation for salaries, Superintendent of Documents: Refunds		79. 10
1919		
Deposited to the credit of appropriation for increase in compensation, Government Printing Office: Dual service		1. 25
1937–38		
Greater Texas and Pan American Exposition: Balance of appropriation		9. 41
1938		
Deposited to miscellaneous receipts:		
Sale of waste paper	$63, 694. 11	
Sale of salvage	8, 002. 17	
Discounts, rebates, etc	1, 435. 84	
Telephone messages	9. 90	
		73, 142. 02
Grand total		15, 384, 081. 18

Table 4 shows comparative production records, by major items, for the fiscal years 1936, 1937, and 1938. There was a decrease in many of the items produced in 1938 as compared with 1937.

TABLE 4.—*Production of principal items entering into printing and binding in fiscal years 1936, 1937, and 1938*

Item	Computation unit	1936	1937	1938
Main office and Congressional Library branch				
Total charges for printing and binding		$18,756,268.94	$18,163,977.24	$17,959,316.06
Jackets written	Number	79,431	79,332	80,106
Estimates made	do	60,622	59,614	58,058
Bills computed	do	98,592	101,473	95,594
Electrotypes, stereotypes, and matrices	Square inches	14,090,784	12,942,570	13,468,121
Postal cards printed	Number	1,944,725,400	2,428,243,040	2,240,766,100
Money orders shipped	do	234,882,275	282,095,325	262,511,860
Actual impressions	do	1,094,225,997	1,084,339,488	1,141,090,031
Chargeable impressions	do	4,656,077,635	4,276,985,299	3,367,279,474
Sheets folded	do	669,778,763	715,915,376	679,169,095
Signatures gathered	do	187,753,611	218,969,549	290,812,096
Tips made	do	41,400,895	31,398,213	43,306,901
Copies wire-stitched	do	83,780,237	86,256,978	78,948,103
Books rounded and backed	do	889,524	1,206,103	1,762,762
Copies covered	do	15,233,487	15,949,612	14,810,426
Stamping impressions	do	3,500,809	2,658,941	1,987,470
Books cased in	do	1,063,610	1,313,203	1,146,603
Books indexed	do	318,064	487,503	268,182
Sheets passed through ruling machine	do	54,720,055	49,162,498	42,172,615
Signatures sewed	do	47,890,764	37,440,737	48,606,987
Copies punched and drilled	do	235,576,177	220,912,293	196,840,923
Sheets and lines perforated	do	11,097,802	12,462,567	11,630,313
Tablets made	do	10,154,694	8,401,788	7,939,214
Miscellaneous rebinding, etc	do	161,479	127,740	179,111

Some of the outstanding increases in production during 1938 as shown by table 4 were: Electrotypes, stereotypes, and matrices 525,551 square inches more produced in 1938 than in 1937; signatures gathered, 71,842,547 more than in 1937; tips made, 11,908,688 more than in 1937; books rounded and backed, 556,659 more than in 1937; signatures sewed, 11,166,250 more than in 1937; miscellaneous rebinding, 51,371 more than in 1937; and actual impressions, 56,250,543 more than in 1937.

Table 5 shows the charges for printing and binding work and the service for which the work was done during the fiscal year 1938. The charges for printing and binding for the Congress amounted to $3,108,000; for the Post Office Department, including the cost of printing postal cards and money-order blanks, $2,225,872.54; Treasury Department, $1,481,770.21; Department of Agriculture, $1,202,017.30; War Department, $714,324.34; Department of Commerce, exclusive of Patent Office printing, $696,318.78; Patent Office, $865,582.72; Navy Department, $662,274.72; Interior Department, $633,095.52; Works Progress Administration, $516,478; Library of Congress, $490,696.10; Department of Labor, $418,605.81; Agricultural Adjustment

Administration, $401,646.54; Social Security Board, $396,602.65; Department of Justice, $342,205.02; Federal Housing Administration, $335,592.46; and State Department, $217,310.87. The Superintendent of Documents ordered the printing of books and pamphlets for sale to the public at a cost of $461,780.44; for depository distribution the cost of publications was $81,737.98; for catalogs and indexes, $27,536.39; for price lists and other Office printing, $70,843.90; and for supplies and services, $41,532.55; making the total cost of work and services furnished to the Superintendent of Documents during the fiscal year 1938, $683,431.26.

A number of other branches of the service had printing and binding costs during the year 1938 in excess of $100,000 each.

TABLE 5.—*Charges for work and to whom delivered during the fiscal year ended June 30, 1938*

Congress:		
Congressional Record	$996, 524. 18	
Publications for folding rooms	89, 008. 72	
Miscellaneous for folding rooms	53, 999. 92	
Publications for international exchange	15, 980. 45	
Franked envelopes and document franks	95, 317. 57	
Bills, resolutions, and amendments	467, 309. 91	
Committee reports	139, 649. 89	
Documents	115, 076. 77	
Hearings	475, 393. 82	
Miscellaneous publications	25, 540. 36	
Miscellaneous printing and binding	634, 198. 41	
Total congressional printing		$3, 108, 000. 00
The Federal Register		97, 682. 13
Private orders by Members of Congress:		
Documents, reports, bills, etc		12, 051. 75
Speeches		80, 186. 86
Other private orders		5, 169. 94
Superintendent of Documents		683, 431. 26
Library of Congress		490, 696. 10
Agriculture		1, 202, 017. 30
Commerce		696, 318. 78
Interior		633, 095. 52
Justice		342, 205. 02
Labor		418, 605. 81
Navy		662, 274. 72
Post Office		2, 225, 872. 54
State		217, 310. 87
Treasury		1, 481, 770. 21
War		714, 324. 34
Agricultural Adjustment Administration		401, 646. 54
Alley Dwelling Authority		485. 12
American Battle Monuments Commission		285. 76

TABLE 5.—*Charges for work and to whom delivered during the fiscal year ended June 30, 1938*—Continued

Board of Governors of the Federal Reserve System	$1, 859. 07
Board of Tax Appeals	20, 087. 98
Bureau of the Budget	35, 743. 06
Central Statistical Board	664. 16
Civil Service Commission	87, 742. 06
Civilian Conservation Corps	57, 004. 49
Commission of Fine Arts	446. 86
Commodity Credit Corporation	39, 620. 42
Coordinator for Industrial Cooperation	26. 56
Court of Claims	23, 758. 05
Court of Customs and Patent Appeals	6, 847. 84
District Court of the United States for the District of Columbia	2, 963. 07
District Government	74, 186. 81
Employees' Compensation Commission	23, 527. 99
Export-Import Bank of Washington	89. 45
Farm Credit Administration	125, 675. 25
Farm Security Administration	94, 292. 78
Federal Alcohol Administration	12. 00
Federal Communications Commission	39, 470. 98
Federal Coordinator of Transportation	10, 800. 00
Federal Deposit Insurance Corporation	4, 811. 93
Federal Emergency Administration of Public Works	68, 860. 05
Federal Emergency Relief Administration	1, 437. 54
Federal Home Loan Bank Board	13, 481. 74
Federal Housing Administration	335, 592. 46
Federal Power Commission	63, 537. 04
Federal Savings and Loan Insurance	1, 765. 45
Federal Surplus Commodities Corporation	8, 614. 03
Federal Trade Commission	24, 342. 98
General Accounting Office	89, 987. 45
George Washington Bicentennial Commission	48, 361. 01
Home Owners' Loan Corporation	87, 709. 26
Inland Waterways Corporation	409. 26
Interstate Commerce Commission	173, 844. 96
National Academy of Sciences	230. 43
National Advisory Committee for Aeronautics	23, 074. 48
National Archives	11, 987. 09
National Bituminous Coal Commission	68, 850. 92
National Capital Park and Planning Commission	87. 19
National Emergency Council	16, 564. 14
National Forest Reservation Commission	827. 92
National Guard, District of Columbia	293. 74
National Labor Relations Board	63, 643. 06
National Mediation Board	1, 447. 49
National Railroad Adjustment Board	19, 161. 99
National Unemployment Registration	232, 212. 52
Northwest Territory Celebration Commission	913. 98
Office of Commissioner General, Paris International Exposition	10. 21

TABLE 5.—*Charges for work and to whom delivered during the fiscal year ended June 30, 1938*—Continued

Panama Canal	$8,612.54
Pan American Union	31,512.50
Patent Office	865,582.72
Prison Industries Reorganization Administration	2,700.82
Puerto Rico Reconstruction Administration	8,724.13
Railroad Retirement Board	40,316.33
Reconstruction Finance Corporation	104,588.24
Recorder of Deeds, District of Columbia	1,921.37
Register of Wills, District of Columbia	2,276.43
Resettlement Administration	65,287.29
Rural Electrification Administration	48,882.52
Securities and Exchange Commission	69,298.85
Smithsonian Institution	64,284.75
Social Security Board	396,602.65
Supreme Court, United States	12,949.90
Tennessee Valley Authority	22,208.06
U. S. Constitution Sesquicentennial Commission	2,934.90
U. S. Court of Appeals for the District of Columbia	1,283.75
U. S. Customs Court	142.45
U. S. Golden Gate Exposition	129.99
U. S. Greater Texas and Pan American Exposition Commission	26.78
U. S. Housing Authority	16,894.53
U. S. Maritime Commission	32,348.15
U. S. Tariff Commission	20,206.16
Veterans' Administration	135,046.12
War Finance Corporation	28.24
White House	7,738.12
Works Progress Administration	516,478.00
	17,959,316.06

Table 6 (p. 102) is a statement giving the details of production costs for each section of the Office, exclusive of the Office of the Superintendent of Documents, grouped under the headings of salaries, wages, leave, and holiday pay; materials, supplies, equipment, and machinery; maintenance and upkeep; administrative and clerical expenses, and other major items entering into the cost of production.

Table 7 (p. 103) is an itemized statement of the classes of work delivered and charged for during the fiscal year 1938. Of publications there were printed 140,548,713 copies, including speeches, private orders, and copies ordered for sale by the Superintendent of Documents, but not including the Congressional Record, of which 8,667,455 were printed. The table shows that the grand total of the number of copies of the various classes of work printed in 1938 was 6,524,377,197, as compared with 6,091,154,072 in 1937 and 5,806,276,860 in 1936.

TABLE 6.—*Statement of the cost of production of the Office for the fiscal year 1938*

Section (manufacturing center)	Salaries, wages, leave, and holiday pay	Material, supplies, equipment, and machinery	Maintenance and upkeep	General overhead	Paper stock issued, illustrations ordered, outside purchase vouchered	Reconciliation between issues and orders and same items computed	Intersection work		Total cost of production
							Debit	Credit	
Job Composing	$492,672.53	$6,655.78	$1,993.82	$99,580.01			$60,955.54	$23,440.65	$638,417.03
Plating Lock-up	37,166.69	259.76	647.57	7,557.72			1,124.73		46,756.47
Title Page	30,043.44	581.67	128.86	5,951.03			11,227.98		47,932.98
Hand	344,350.29	14,461.64	5,416.88	69,702.71			106,170.71		540,102.23
Linotype	776,763.46	20,070.48	18,470.14	157,475.74			499,147.97	10,896.30	1,461,031.49
Monotype	1,138,865.57	39,976.53	21,164.74	230,841.65			555,086.14	166,140.48	1,819,794.15
Proof	915,383.58	725.17	698.74	174,620.76			112.61	1,091,540.86	
Patents	523,954.11	3,033.56	6,381.10	106,154.63			54,782.28	3,997.56	690,308.12
Library Composing Branch	110,326.77	667.69	254.56	8,074.94	$40,435.95		21,429.06		181,188.97
Platemaking: Molding, stereotyping, and finishing	278,789.04	23,220.31	12,178.04	64,336.10			9,270.98	69,804.38	317,990.09
Photoengraving	95,683.75	17,866.21	3,293.91	22,075.78			6,563.60	65.75	145,417.50
Press: Job, book, offset, and tabulating card	1,744,149.44	67,698.23	85,425.66	340,811.35			112,195.94	60,892.17	2,289,388.45
Money Order	58,962.58	2,208.10	5,335.46	11,529.70	97,715.28		2,460.47		178,211.59
Postal Card	183,943.10	48,231.35	15,639.76	35,793.10	680,016.82		1,316.43		964,940.56
Pamphlet	1,029,949.92	20,015.12	31,433.40	197,106.81	11,145.90		87,734.74	5,753.17	1,371,632.72
Blank	439,631.69	20,975.13	10,596.98	83,873.48	206,774.09		3,703.53	3,984.29	761,570.61
Book	751,042.31	119,247.96	17,216.89	142,581.10	30,221.70		37,747.04	41,315.61	1,056,741.39
Cutting and Packing	230,773.75	12,893.43	6,018.02	44,215.27	1,364,956.77		1,381.36	28,411.17	1,631,827.43
Library Binding Branch	146,417.36	3,491.36	348.21	10,837.20	2,934.78		1,332.75	11,376.94	153,984.72
Details Chargeable	74,339.11	96.73	162.97	3,404.71			135.54	22,087.77	56,051.29
Stores (handling paper, illustrations, and outside purchases)	237,754.22	7,334.17	37,546.06	41,471.14			326.60	86,965.04	237,467.15
Ink	15,618.51	51,089.11	869.93	2,856.57				70,434.12	
Metal	12,879.65	16,524.20	4,398.14	2,353.39				36,155.38	
Roller and glue	8,194.35	20,917.90	341.19	1,499.41				30,952.85	
Paper Stock, Press Division					3,381,885.45	−$310,542.90			3,071,342.55
Illustrations					138,780.15	−55,039.00			83,741.15
Outside Purchases					18,908.51	+11,390.50			30,299.01
Work for stock returned to stores							88,252.86	88,252.86	
Miscellaneous items							168,158.56		168,158.56
Miscellaneous service for Superintendent of Documents other than printing and binding		16,554.39	19,016.78				5,961.38		41,532.55
Total	9,677,655.22	534,795.98	304,977.81	1,864,704.30	5,973,775.40	−354,191.40	1,836,578.80	1,852,467.35	17,985,828.76

TABLE 7.—*Itemized statement of the classes and charge for work delivered during the fiscal year 1938*

Class of work	Number of copies	Number of type pages	Number of publications bound	Charges for composition, presswork, plating, folding, binding, illustrations, contract, miscellaneous	Charges for paper	Charges for author's alterations	Charges for rush and overtime work	Total charges
Publications:								
Smaller than octavo	10,457,239	19,923	16,928	$158,024.83	$41,644.88	$8,627.23	$3,936.26	$212,233.20
Octavo	79,136,243	837,754	227,734	2,978,983.68	438,190.55	124,188.75	155,485.74	3,696,848.72
Royal octavo	5,481,575	82,800	38,538	476,230.91	82,746.10	22,569.29	28,105.67	609,651.97
Quarto	11,390,370	95,527	18,254	764,599.18	76,811.53	40,588.62	45,204.04	927,203.37
Miscellaneous	34,083,286	1,235,441	179,641	459,299.83	188,660.55	959.08	16.43	648,935.89
Congressional Record	8,667,455	66,461	31,256	746,675.04	130,212.88	4,277.60	115,358.66	996,524.18
Bills, resolutions, and amendments	7,361,877	130,787	1,183	369,270.24	20,495.37	3,487.78	74,056.52	467,309.91
Specifications of patents, trade-marks, etc	5,169,438	140,184	----------	683,793.65	10,730.26	5,816.83	----------	700,340.74
Official Gazette and Annual Indexes	227,607	28,089	50	113,391.46	20,893.91	1.28	----------	134,286.65
Post Office—money orders	262,511,860	----------	----------	55,259.73	97,715.28	----------	----------	152,975.01
Letterheads and envelopes	239,193,515	----------	----------	206,565.94	244,552.10	1,069.34	3,419.13	455,606.51
Blanks, notices, schedules, etc	5,855,296,924	----------	----------	2,920,926.83	2,754,235.73	34,179.88	92,714.20	5,802,056.64
Blank books	5,322,393	----------	----------	353,749.88	102,681.46	1,404.80	3,593.90	461,430.04
Binding newspapers, documents, reports, etc	77,415	----------	----------	486,519.51	----------	----------	260.03	486,779.54
Blank paper	----------	----------	----------	126,701.13	1,277,028.66	----------	----------	1,403,729.79
Miscellaneous charges	----------	----------	----------	630,324.93	165,657.77	4,011.13	3,410.07	803,403.90
Total	6,524,377,197	2,636,966	513,584	11,530,316.77	5,652,257.03	251,181.61	525,560.65	17,959,316.06

The increase in the number of copies of the various classes of work printed in 1938 over 1937 was 433,223,125 copies. The total charges for this work in 1938 amounted to $17,959,316.06, as compared with $18,163,977.24 in 1937.

Table 8 gives the details of the inventory of stock and machinery and equipment on hand at the close of the fiscal year 1938. The value of supplies on hand, including paper, envelopes, and other materials, was $1,314,278.26, as compared with $1,353,644.70 in 1937, representing a decrease in the value of stock on hand of $39,366.44. The value of machinery and equipment in 1938 was $5,395,885.07, as compared with $5,494,267.03 in 1937, or a decrease in the value of machinery and equipment of $98,381.96. The total value of stock of all kinds and machinery and equipment on hand at the close of the fiscal year 1938 was $6,710,163.33, as compared with $6,847,911.73 at the close of the year 1937.

Table 8.—*Inventory of quantity and cost of paper and envelopes, materials and supplies, and machinery and equipment on hand June 30, 1938*

	Pounds	Cost
Paper and envelopes:		
Printing	3,736,272	$246,966.79
Mimeograph	549,434	34,219.37
Safety writing	38,133	4,727.80
Writing	2,414,583	154,550.71
Map	94,381	12,436.12
Manifold	356,905	51,381.94
Bond	1,834,158	172,144.62
Ledger	723,763	86,898.73
Index	503,656	53,451.40
Cover	239,292	26,456.98
Manila	239,481	15,962.32
Kraft	482,877	20,825.82
Manila tagboard	527,018	39,013.14
Cardboard	144,684	7,533.85
Bristolboard	1,674,252	88,453.97
Miscellaneous	108,760	12,352.61
Binder's board	639,660	17,843.97
Envelopes		19,728.78
Total, paper and envelopes		1,064,948.92
Other materials and supplies:		
Miscellaneous supplies		170,826.92
Book cloth		19,596.85
Ink ingredients		11,387.90
Buckram		14,845.34
Leather		6,818.30
Gold leaf		6,355.13
Ink (made in Government Printing Office)		4,188.54
Cartons and containers		9,592.57
Imitation leather		5,717.79
Total, materials and supplies		249,329.34
Total, materials and supplies, paper and envelopes		1,314,278.26
Machinery and equipment		5,395,885.07
Grand total		6,710,163.33

Table 9 shows the number of copies of publications printed in 1938 for the Congress, the executive departments, and independent Government establishments. During the fiscal year 1938 there was

printed a total of 117,450,064 publications, as compared with 180,637,668 in 1937. The figures in table 9 are exclusive of the number of copies of speeches printed for Members of Congress and other private orders.

TABLE 9.—*Publications, including annual reports and documents, printed on requisition during the fiscal year ended June 30, 1938, for Congress, the executive departments, and independent Government establishments*

Congress	7, 108, 586
The Federal Register	2, 041, 590
Superintendent of Documents	12, 603, 715
Library of Congress	109, 209
Agriculture	24, 506, 292
Commerce	4, 569, 582
Interior	2, 285, 542
Justice	260, 384
Labor	2, 892, 170
Navy	3, 771, 679
Post Office	6, 534, 130
State	539, 648
Treasury	2, 454, 837
War	8, 347, 701
Agricultural Adjustment Administration	24, 355, 142
Alley Dwelling Authority	1, 505
American Battle Monuments Commission	103
Board of Governors of the Federal Reserve System	3, 008
Board of Tax Appeals	82, 307
Bureau of the Budget	1, 900
Central Statistical Board	2, 510
Civil Service Commission	127, 748
Civilian Conservation Corps	97, 127
Commission of Fine Arts	1, 005
Commodity Credit Corporation	27
Court of Claims	44, 730
Court of Customs and Patent Appeals	726
District Government	12, 330
Employees' Compensation Commission	93, 703
Export-Import Bank of Washington	3
Farm Credit Administration	1, 024, 493
Farm Security Administration	174, 500
Federal Communications Commission	37, 271
Federal Deposit Insurance Corporation	8
Federal Emergency Administration of Public Works	230, 521
Federal Home Loan Bank Board	132, 200
Federal Housing Administration	2, 714, 577
Federal Power Commission	173, 893
Federal Savings and Loan Insurance	6, 000
Federal Surplus Commodities Corporation	81, 025
Federal Trade Commission	83, 294

TABLE 9.—*Publications, including annual reports and documents, printed on requisition during the fiscal year ended June 30, 1938, for Congress, the executive departments, and independent Government establishments*—Continued

General Accounting Office	19, 579
George Washington Bicentennial Commission	21, 000
Home Owners' Loan Corporation	7, 271
Inland Waterways Corporation	3, 000
Interstate Commerce Commission	1, 468, 937
National Academy of Sciences	3, 000
National Advisory Committee for Aeronautics	40, 014
National Archives	42, 036
National Bituminous Coal Commission	127, 366
National Emergency Council	49, 506
National Forest Reservation Commission	8, 000
National Labor Relations Board	386, 036
National Mediation Board	5, 526
National Railroad Adjustment Board	953
National Unemployment Registration	1, 218, 247
Office of Commissioner General, Paris International Exposition	1
Panama Canal	2, 196
Pan American Union	126, 806
Patent Office	125, 461
Prison Industries Reorganization Administration	2, 504
Puerto Rico Reconstruction Administration	5, 024
Railroad Retirement Board	160, 116
Reconstruction Finance Corporation	321, 051
Recorder of Deeds, District of Columbia	12
Register of Wills, District of Columbia	1, 512
Resettlement Administration	13, 077
Rural Electrification Administration	734, 860
Securities and Exchange Commission	72, 560
Smithsonian Institution	99, 679
Social Security Board	4, 048, 335
Supreme Court, U. S	22, 210
Tennessee Valley Authority	60, 480
U. S. Constitution Sesquicentennial Commission	65, 000
U. S. Court of Appeals for the District of Columbia	4, 102
U. S. Golden Gate Exposition	80
U. S. Greater Texas and Pan American Exposition	253
U. S. Housing Authority	11, 500
U. S. Maritime Commission	59, 631
U. S. Tariff Commission	12, 816
Veterans' Administration	97, 526
War Finance	150
White House	57
Works Progress Administration	495, 873
Total	117, 450, 064

Table 10 shows the receipts from the sale of waste paper, waste materials, and condemned machinery, and the surplus from the sale by the Office of the Superintendent of Documents of Government publications over the cost of printing the same during the fiscal year ended June 30, 1938.

TABLE 10

Condemned material, machinery, waste wood, waste metal, etc	$8, 002. 17
Waste paper	63, 694. 11
Surplus from sale of documents and miscellaneous collections	376, 514. 69
Discounts, rebates, etc	1, 435. 84
Telephone messages	9. 90
	449, 656. 71

PUBLIC DOCUMENTS

The trend is still upward in the sale of Government publications, as is shown by the following table:

Fiscal year	Number of orders	Number of publications	Amount
1933	481, 295	8, 255, 490	$540, 532. 29
1934	496, 215	10, 459, 964	594, 007. 64
1935	538, 698	9, 499, 205	637, 414. 43
1936	548, 848	8, 832, 162	680, 725. 69
1937	595, 823	10, 074, 337	813, 246. 60
1938	697, 970	11, 546, 273	845, 779. 15

The special committee which was assembled by the Director of the Bureau of the Budget during the past year for the purpose of studying the questions of processing in the departments and the distribution of Government publications came to the conclusion that departments could not be expected to supply publications free to everyone, because of the limitations placed upon their appropriations. The committee expressed this sentiment in the following statement in its report:

> The committee feels that Government publications generally should be offered to the public on a sales basis rather than free in order to eliminate distribution to those who do not desire the information, to achieve a wide distribution of useful information at small cost, and, in fact, to increase net revenues to the Government.

Many of the publications printed in the Government Printing Office would be welcomed by appreciative readers if their existence were known, and such readers would be willing to pay a nominal price for the same. As an illustration of this fact, the Post Office Department issued a publication with the title, "Description of United States Postage Stamps," and, as a result of news items carried in the daily papers, 169,466 copies have been sold.

It is felt that a greater volume of sales would result and that much time and money would be saved if the method of remitting recommended by the Public Printer or some similar simplified sales procedure were adopted.

The net sales for the last fiscal year amounted to $845,779.15, which was $32,532.55 more than for the previous year. After paying the cost of printing the sales publications there remained a balance of $373,768.52, which was turned into the Treasury as miscellaneous receipts. The sales orders totaled 697,970 last year, an increase of 102,147 over the previous year, and the 11,546,273 copies sold exceeded by 1,471,936 the last year's mark.

Distribution

Existing law did not contemplate the mailing of forms, but as the Public Printer realized the new agencies were not equipped for this work and that it could be handled at a lower cost in the Government Printing Office, he approved the work being done in this connection by the Superintendent of Documents as an emergency measure. It is impossible to estimate in advance the personnel and supplies that will be needed for this work, but fortunately the Public Printer is authorized to perform mailing operations and to charge the cost of the same to the departments. In this way it has been possible to add to the force in order to take care of peak loads and rush jobs which frequently occur.

Last fall we were called upon to handle the mailing connected with the Unemployment Census, which involved 100,000,000 forms. Special mailings of this character are not exceptional and invariably they are rush jobs to be mailed in a specified time, which frequently requires overtime work. A centralized point for mailing has many advantages, as it is undoubtedly wasteful to truck to the departments work that later has to be returned to the Post Office for mailing. During the past year 674,809,165 copies of forms were distributed for the various departments and agencies of the Government.

The act of August 23, 1912, provided for the mailing of Government publications—as distinguished from forms—under the direction of the Public Printer at the Government Printing Office. There is a disregard of this law by some of the departments and independent agencies. However, the permanent interdepartmental committee on printing, created by the Executive order of October 29, 1938, quoted elsewhere in this report, for the purpose of discussing matters and

considering problems affecting printing, processing, and distribution, may be able to correct existing abuses and to recommend new legislation that will correct defects in the present laws that deal with distribution.

The following report shows the number of copies of publications on hand July 1, 1937, the number received and distributed during the fiscal year 1938, including forms, and the number of copies on hand June 30, 1938, for the various executive departments and independent establishments of the Government:

Publications received, distributed, and sold during fiscal year 1938

Department or establishment	Copies of publications on hand July 1, 1937	Copies of publications received during year	Forms received during year	Copies of publications distributed during year	Forms distributed during year	Copies of publications on hand June 30, 1938
Executive departments						
State	5	520		12		513
Treasury	1,000,955	1,967,054	26,995,242	2,111,630	26,995,242	856,379
War	956	1,710	328,600	1,555	328,600	1,111
Justice	2,793	236,254		236,464		2,583
Post Office	23,783	7,207,899	7,169,400	7,199,110	7,169,400	32,572
Navy	53,978	52,191		43,028		63,141
Interior	922,226	3,101,593		2,845,222		1,178,597
Agriculture	13,600,659	27,068,802	3,980,898	28,027,340	3,980,898	12,642,121
Commerce	1,557,849	3,300,618	22,372,000	3,152,293	22,372,000	1,706,174
Labor	658,281	3,242,279		2,981,025		919,535
Independent offices						
Civil Service Commission		1,159		628		531
Employees' Compensation Commission	895	9,750	6,095,900	8,899	6,095,900	1,746
Federal Communications Commission	601					601
Federal Power Commission	2,252			25		2,227
Federal Reserve Board	657					657
Federal Trade Commission	75,493	39,740		43,972		71,261
General Accounting Office		950		950		
Interstate Commerce Commission	75,374	677,504		677,504		75,374
National Advisory Committee for Aeronautics		410		410		
National Archives	4,978	48,158		46,349		6,787
Personnel Classification Board	2,138					2,138
President's Committee on Administration Management	21,747	18,476		24,347		15,876
Smithsonian Institution	160,109	97,134		87,178		170,065
United States Maritime Commission		560		560		
Judiciary						
Court of Customs and Patent Appeals	733	405		68		1,070
Supreme Court of United States		4,533		4,533		
Congressional						
Bicentennial Commission	1,728	5,000		1		6,727
Congress	13,574	5,674	96,000	5,774	96,000	13,474
Government Printing Office		19,916		19,916		
Library of Congress	123,872	15,738		15,201		124,409

Publications received, distributed, and sold during fiscal year 1938—Continued

Department or establishment	Copies of publications on hand July 1, 1937	Copies of publications received during year	Forms received during year	Copies of publications distributed during year	Forms distributed during year	Copies of publications on hand June 30, 1938
Emergency Administrations						
Agricultural Adjustment Administration	25,315	25,983,454	138,868,884	26,007,661	138,868,884	1,108
Commodity Credit Corporation	7,350	----------	10,493,525	----------	10,493,525	7,350
Emergency Conservation Work	2,490	----------	----------	----------	----------	2,490
Farm Credit Administration	895,000	55,094	120,000	161,484	120,000	788,610
Federal Emergency Relief Administration	----------	----------	149,000	----------	149,000	----------
Federal Home Loan Bank Board	----------	62,700	----------	62,700	----------	----------
National Emergency Council	----------	----------	747,500	----------	747,500	----------
National Bituminous Coal Commission	----------	----------	1,653,700	----------	1,653,700	----------
National Planning Board	1,680	----------	----------	54	----------	1,626
National Resources Committee	11,118	77,212	----------	78,878	----------	9,452
National Unemployment Register	----------	39,300	93,099,644	39,300	93,099,644	----------
Public Works Administration	2,639	12,125	----------	12,125	----------	2,639
Puerto Rico Reconstruction Administration	----------	4,256	1,736,740	4,256	1,736,740	----------
Rural Electrification Administration	----------	229,837	----------	229,837	----------	----------
Social Security Board	----------	69,261	60,931,916	69,261	60,931,916	----------
Works Progress Administration	----------	288,993	299,970,216	288,993	299,970,216	----------
Total	19,251,228	73,946,259	674,809,165	74,488,543	674,809,165	18,708,944
Superintendent of Documents	3,361,488	18,479,724	----------	16,785,155	----------	5,056,057
Grand total	22,612,716	92,425,983	674,809,165	[1] 91,273,698	674,809,165	23,765,001

[1] This total includes 497,525 copies of departmental and 918,745 Superintendent of Documents discarded obsolete publications making the actual distribution 89,857,428 publications and 674,809,165 forms, totaling 764,666,593 copies.

It is obvious that with an opening inventory of 22,612,716 publications and the receipt of 92,425,983 more during the year, there would be found a number of them that would be obsolete or possibly in excess of all requirements. In order to eliminate this class of publications we are continually analyzing our records for the purpose of weeding out unnecessary copies, as we must conserve so far as possible our available storage space.

Legislation

H. R. 5471 to amend the laws relating to the distribution of public documents to depository libraries, so as to make available the journals of Congress, all congressional hearings, all Senate and House public bills and resolutions, and all reports on private bills, and concurrent or simple resolutions, was passed and approved by the President June 25, 1938.

The passage of this bill had been requested by officials of the American Library Association, who had contacted the depository libraries,

with the result that many requests for the enactment of this legislation were received by the committee.

It is estimated that the cost of this additional material, based on selections made, will be approximately $20,000, and that half of this amount will be required for furnishing copies of public bills and resolutions.

There is some doubt as to whether the librarians appreciate what it really means, in the way of labor and filing facilities, to take care of the public bills and resolutions. In order to make sure there was no misunderstanding by the librarians who selected them, they have been asked to reconsider their selections, and have been advised that during the past year there were approximately 12,000 prints of bills, which represented the introductory, reported and referred prints, and that unless they are filed daily they would be of little reference value.

Depository Libraries

The proposed survey for the depository libraries to be made by the American Library Association has not as yet received final approval of the officers of the association, but it is still hoped the Executive Board will be able to convince the association of the need for a field survey.

The Chairman of the Joint Committee on Printing and the Public Printer have approved such a survey, as they are interested in eliminating the waste in the distribution of publications to the public and to the libraries.

The present depository law is fundamentally the same as that enacted in 1895, with only slight modifications. Although undoubtedly originally written for the purpose of placing Federal public documents in the libraries throughout the United States, so that the American people could have free access to them in every congressional district, such distribution remaining unchanged has led to waste on the one hand and to unfairness on the other. The framers of the original law could not fully foresee the development of large metropolitan areas and the unevenness in the development of libraries throughout the United States, which have nullified their original intent.

It is only natural, therefore, that there should have developed the present necessity of rewriting that law on a more sound and equitable basis. Although population figures, metropolitan areas, size of book collections, and much of the other necessary statistical data can be accumulated readily to show that the present law has defeated its purpose, a comprehensive field survey of all depositories is necessary in order that no present designated depository will be deprived of its

privilege if it can show conclusively that it has adequately housed the Federal public documents and that their constant demand and use in that institution is of sufficient magnitude to justify its continuance as a depository notwithstanding the fact that the statistical data may be against it.

The survey, as contemplated, will supply the information that is required to determine the class of library eligible to become a depository, and where it should be located; and I feel that responsibility for the proper selection and fitness of such libraries should be vested in the American Library Association, which undoubtedly would work in conjunction with the State committees.

Processed Material

The improved types of processing equipment and the broad authority granted emergency agencies in the expenditure of funds is largely responsible for the increased volume of processed materials.

There seems to be no question that matter is being processed that should be printed, as there has been a noticeable increase in the number of processed publications received in our library during the past fiscal year. This is the result of the resolution of the Joint Committee on Printing directing the departments and agencies of the Government to furnish our library with one copy of every publication, whether printed or processed. The monthly lists submitted by the various Government agencies have been helpful in serving as checklists so that omissions can be detected. The increase in the volume of processed material will make it necessary to add to the library and cataloging forces because, aside from the time required to examine it to determine its value, the work in cataloging is more than our present force can handle.

The importance of having references to this processed material included in our catalogs has been recognized by this Office for some time, and this matter was called to the attention of Congress by the Select Committee to Investigate the Executive Agencies of the Government in its report, which reads in part as follows:

> The development of this type of printing in the departments and establishments has a much wider significance than appears on the surface. As long as it was confined to the printing of forms and office memoranda the general public had no particular interest in what was produced, but since this work has been extended to pamphlets and books it has become a matter of concern to librarians and all persons using Government publications. The major complaints are regarding the perishable character of the material and the lack of listing.

* * * * * * *

The desirability of listing all Government publications has long been recognized, and the Printing Act of 1895 provides that the Superintendent of Documents shall issue a monthly catalog. At that time, and for some years thereafter, practically all publications were printed at the Government Printing Office, and the monthly catalog contained a complete listing, as the Superintendent of Documents received one copy automatically, as the edition was printed. As the volume of duplicated material increased it became evident that the monthly catalog was not a complete list, and beginning with January 1, 1936, the Superintendent of Documents endeavored to include in this catalog all publications produced by duplicating process. The listing, however, is incomplete because the departments and independent establishments do not furnish copies to the Public Documents Library, which has charge of the compilation of the catalog. The Public Printer has requested the various Government agencies to supply a copy of every publication, but the publishing agencies sometimes neglect to furnish copies.

It is difficult at the present time for libraries and students of Government affairs to keep in touch with the publishing activities of the executive agencies. Even persons in Washington, who have many contacts with the departments, find it difficult to ascertain what has been published.

As a result of such comments and of more specific recommendations of the Public Printer, the Joint Committee on Printing issued the order requiring the filing of copies of all of their processed material with the Superintendent of Documents. Through a closer compliance by the departments with this order and the increase in force required to handle the additional cataloging work, it is believed that difficulties along this line will be eliminated or at least greatly reduced.

Under authority of the act approved February 28, 1933 (Public, No. 381, 72d Cong.), the practice of printing supplementary records and statistics in the Annual Report of the Public Printer has been discontinued, and original copies of such information as has been prepared are on file for public inspection.

A. E. Giegengack,
Public Printer.

U. S. GOVERNMENT PRINTING OFFICE: 1939 113626